30 - 50 MHz

TWPC-0310-1, 0410-1
BANDPASS CAVITIES

The Telewave TWPC-0310-1 and TWPC-0410-1 are 10" diameter, ¼-wavelength, high "Q" bandpass cavity filters with superior selectivity. Bandpass cavities reject all frequencies outside a narrow pass band. These cavities reduce transmitter sideband noise, and also protect receivers against desensitization.

The TWPC-0310-1 covers 30–40 MHz, and the TWPC-0410-1 covers 40–50 MHz. The tuning range of these cavities is approximately ±2.5 Mhz from center frequency as built. All cavities are tuned to specified frequencies prior to shipping. No further adjustments should be required. The positive locking mechanism allows for quick field re-tuning if frequency changes become necessary.

These cavities feature calibrated adjustable coupling, so that insertion loss can be easily set from 0.5 dB to 2 dB or more with corresponding increases in selectivity. This allows cavity response to be optimized for any operating environment. At densely populated sites, the 0310/0410-2 dual and 0310/ 0410-3 triple cavity filters provide much greater selectivity with minimum insertion loss. Multiple cavities can also provide a wider passband when required. Mounting rails are provided for all multiple-cavity filters.

Excellent frequency stability is achieved by the use of a specially machined compensator and Invar rod. The pass frequency is temperature stable from -30°C to +70°C. Ground loop technology places the center pin of each coupling loop at DC ground potential.

Heavy duty materials are used throughout each cavity to insure high performance and long life. Cavity top plates are machined from 1/4-inch aluminum, and are heliarc welded to the cavity body at the high current point for improved conductivity and strength. This allows Telewave cavities to handle up to 350 watts, depending on insertion loss.

Rigid foam inserts support the tuner assembly allowing vertical or horizontal mounting. Similar metals and alodined aluminum help prevent galvanic corrosion. Silver plated tuners and beryllium copper finger stock provide non-corrosive low loss contact, and ensure reliable, long-term performance.

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30 - 50 MHz

TWPC-0310, 0410

TYPICAL SELECTIVITY CHARACTERISTICS

Figure 1

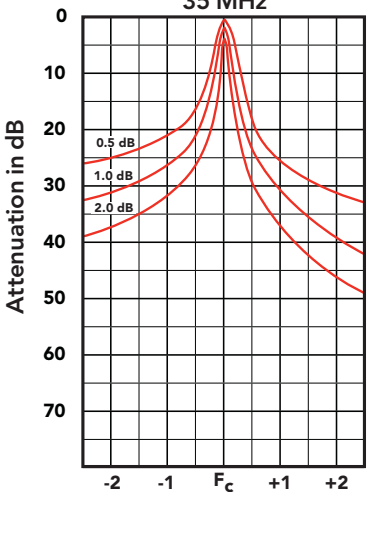
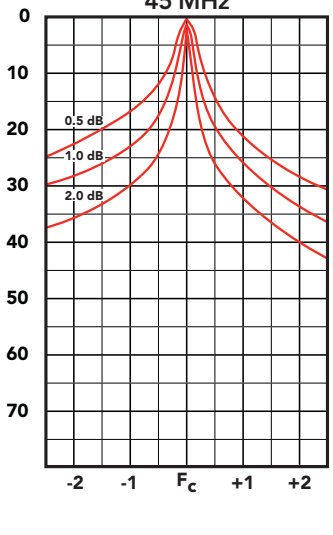


Figure 2



Frequency (MHz)

MODEL	TWPC-0310	TWPC-0410
Frequency coverage	30-40 MHz	40-50 MHz
Tuning range from center frequency	± 2.5 MHz	± 2.5 MHz
Insertion loss (adjustable)	0.5 to 2.0 dB	0.5 to 2.0 dB
Attenuation	See figure 1	See figure 2
Cavity dimensions (Diam. x H) in. (cm)	10 x 88 (25 x 224)	10 x 72 (25 x 183)
Maximum dimensions with tuners extended in. (cm)	10 x 97 (25 x 246)	10 x 81 (25 x 206)
Net weight lb. (kg)	29 (73.7)	26 (66)
Shipping weight lb. (kg)	40 (101.6)	36 (91.4)

COMMON SPECIFICATIONS	
Nominal impedance	50 ohms
VSWR at resonance (max)	1.5:1
Input power (max) vs. insertion loss	0.5 dB - 350 watts, 1 dB - 250 watts, 2 dB - 150 watts
Temperature range	-30°C to +70°C
Cavity electrical length	1/4 wavelength
Outer conductor, end plates	6061-T6 aluminum
Inner conductor, coupling loops	Silver plated copper
Tuning rod	Invar
Contactors, fingerstock	Beryllium copper
Connectors	N or UHF female (opt.)
Finish	Gray acrylic enamel

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40 - 50 MHz

TWPC-0412-1, TWNC-0412-1

BANDPASS CAVITY, NOTCH CAVITY

The Telewave TWPC-0412-1 is a 12" diameter, ¼-wavelength high "Q" bandpass cavity filter with superior selectivity. Band-pass cavities reject all frequencies outside a narrow pass band. These cavities reduce transmitter sideband noise, and also protect receivers against desensitization.

The TWNC-0412-1 is a 12" diameter, ¼-wavelength notch cavity with an adjustable coupling loop. Notch cavities reject a narrow band of frequencies, and are often used in conjunction with pass cavities in complex filtering designs.

The TWPC and TWNC-0412-1 cover 40-50 MHz. The tuning range of these cavities is approximately ±2.5 Mhz from center frequency as built. All cavities are tuned to specified frequencies prior to shipping. No further adjustments should be required. The positive locking mechanism allows for quick field re-tuning if frequency changes become necessary.

These cavities feature calibrated adjustable coupling, so that insertion loss can be easily set from 0.5 dB to 2 dB or more with corresponding increases in selectivity. This allows cavity response to be optimized for any operating environment. At densely populated sites, the 0412-2 dual cavity filter provides greater selectivity with minimum insertion loss.

Multiple cavities can also provide a wider passband or notch when required. Mounting rails are provided for all multiple-cavity filters.

Excellent frequency stability is achieved by the use of a specially machined compensator and Invar rod. The pass frequency is temperature stable from -30°C to +70°C. Telewave Ground Loop technology places the center conductor of each coupling loop at DC ground potential for lightning protection and noise reduction.

Heavy duty materials are used throughout each cavity to insure high performance and long life. Cavity top plates are machined from 1/4-inch aluminum, and are heliarc welded to the cavity body at the high current point for improved conductivity and strength. This allows Telewave cavities to handle up to 350 watts, depending on insertion loss.

Rigid foam inserts support the tuner assembly allowing vertical or horizontal mounting. Similar metals and alodined aluminum help prevent galvanic corrosion. Silver plated tuners and beryllium copper finger stock provide non-corrosive low loss contact, and ensure reliable, long-term performance.

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TWDS-5025 Rev. 2/07

40 - 50 MHz

TWPC-0412-1, TWNC-0412-1

TYPICAL RESPONSE

Figure 1 - TWPC-0412-1

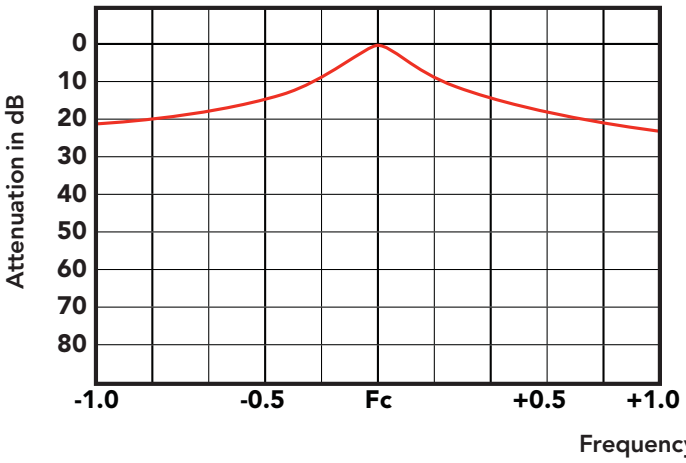
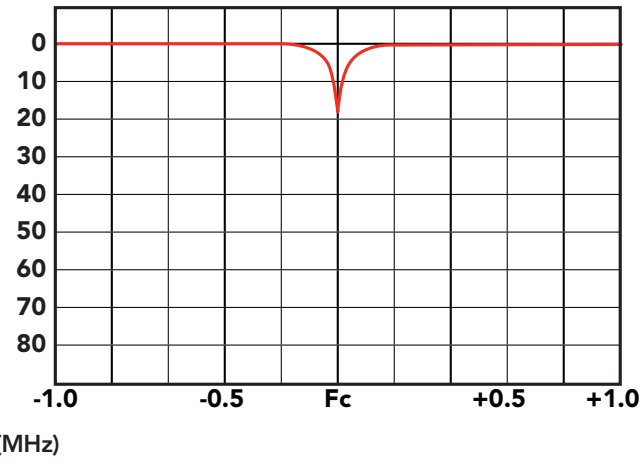


Figure 2 - TWNC-0412-1



SPECIFICATIONS	TWPC / TWNC-0412-1
Frequency coverage	40-50 MHz
Tuning range from center frequency	± 2.5 MHz
Insertion loss (adjustable)	0.5 to 2.0 dB
Attenuation at 1dB insertion loss	See Figure 1, 2
Nominal impedance	50 ohms
VSWR at resonance (max)	1.5:1
Input power (max) vs. insertion loss	0.5 dB - 350 watts, 1 dB - 250 watts, 2 dB - 150 watts
Temperature range	-30°C to +70°C
Cavity electrical length	1/4 wavelength
Outer conductor, end plates	6061-T6 aluminum
Inner conductor, coupling loops	Silver plated copper
Tuning rod	Invar
Contactors, fingerstock	Beryllium copper
Cavity dimensions (Diam. x H) in. (cm)	12 x 72 (30 x 183)
Maximum dimensions with tuners extended in. (cm)	12 x 81 (30 x 206)
Connectors	N or UHF female (opt.)
Finish	Gray acrylic enamel
Net weight lb. (kg)	27 (68.6)
Shipping weight lb. (kg)	38 (96.5)

NOTE: When ordering be sure to specify exact frequency and model number. Contact the factory if additional information or assistance is required.

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88 - 108 MHz

TWPC-1005-1,2
BANDPASS CAVITIES

The Telewave TWPC-1005-1, 2 are 5" diameter, ¼-wavelength, high "Q" bandpass cavity filter with superior selectivity. Bandpass cavities reject all frequencies outside a narrow pass band. These cavities reduce transmitter sideband noise, and also protect receivers against desensitization.

TWPC-1005 cavities cover 88-108 MHz, and can be tuned at 50 or 75 ohms upon request. All cavities are tuned to specified frequencies prior to shipping, and no further adjustments should be required. The positive locking mechanism allows for quick field retuning if frequency changes become necessary.

These cavities feature calibrated adjustable coupling, and insertion loss can be easily set from 0.5 dB to 2 dB or more to improve selectivity. This allows cavity response to be optimized for any operating environment. At densely populated sites, the TWPC-1005-2 dual cavity filter provides greater selectivity with minimum insertion loss. Multiple cavities can also provide a wider passband when required. Mounting rails are provided for all multiple-cavity filters.

Excellent frequency stability is achieved by the use of a specially machined compensator and Invar rod. The pass frequency is temperature stable from -30°C to +70°C. Telewave Ground Loop technology places the center conductor of each coupling loop at DC ground potential for lightning protection and noise reduction.

Heavy duty materials are used throughout each cavity to insure high performance and long life. Cavity top plates are machined from 1/4-inch aluminum, and are heliarc welded to the cavity body at the high current point for improved conductivity and strength. This allows Telewave cavities to handle up to 350 watts, depending on insertion loss.

Rigid foam inserts support the tuner assembly allowing vertical or horizontal mounting. Similar metals and alodined aluminum help prevent galvanic corrosion. Silver plated tuners and beryllium copper finger stock provide non-corrosive low loss contact, and ensure reliable, long-term performance..

TWPC-1005-1

TWPC-1005-2

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88 - 108 MHz

TWPC-1005-1,2

TYPICAL SELECTIVITY CHARACTERISTICS

Figure 1 TWPC-1005-1 SINGLE

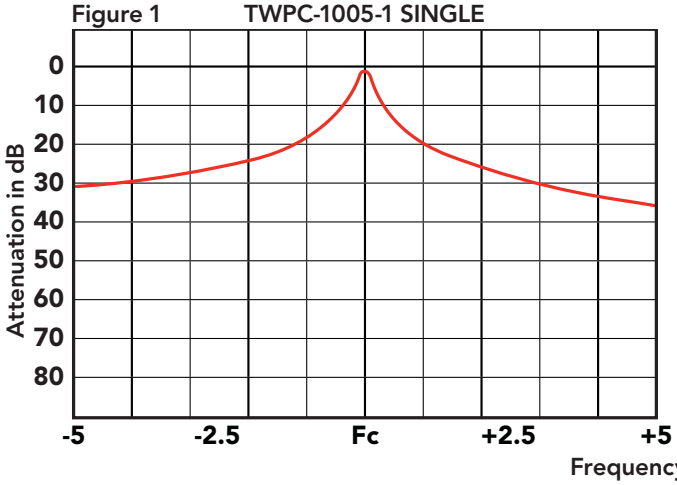
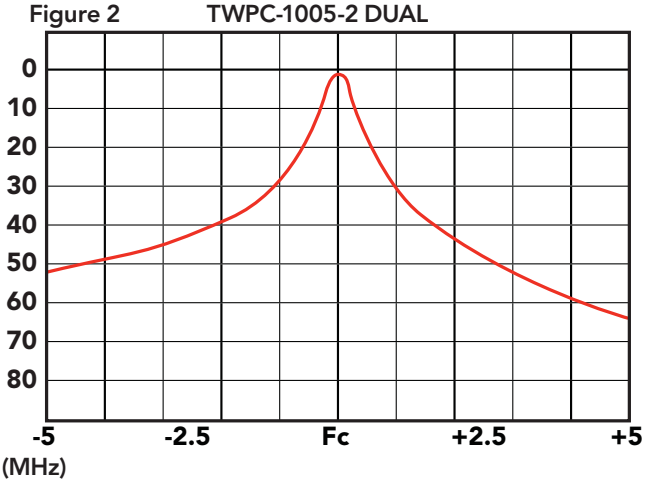


Figure 2 TWPC-1005-2 DUAL



MODEL	TWPC-1005-1	TWPC-1005-2
Insertion loss (adjustable)	0.5 to 2.0 dB	1.0 to 4.0 dB
Attenuation at 1dB insertion loss	See figure 1	See figure 2
Maximum dimensions with tuners extended in. (cm)	5 x 48 (13 x 123)	5.25 x 19 x 48 (13 x 48 x 123)
Net weight lb. (kg)	6 (2.7)	11 (5)
Shipping weight lb. (kg)	10 (4.5)	18 (8.2)

COMMON SPECIFICATIONS	
Tuning frequency range	88-108 MHz
Nominal impedance	50 ohms (75 ohm opt.)
VSWR at resonance (max)	1.5:1
Input power (max) vs. insertion loss	0.5 dB - 350 watts, 1 dB - 250 watts, 2 dB - 150 watts
Temperature range	-30°C to +70°C
Cavity electrical length	1/4 wavelength
Outer conductor, end plates	6061-T6 aluminum
Inner conductor, coupling loops	Silver plated copper
Tuning rod	Invar
Contactors, fingerstock	Beryllium copper
Cavity dimensions (Diam. x H) in. (cm)	5 x 36 (13 x 91)
Connectors	N or UHF female (opt.)
Finish	Gray acrylic enamel

NOTE: When ordering be sure to specify exact frequency and model number. Contact the factory if additional information or assistance is required.

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88 - 108 MHz

TWPC-1008-1, 2
BANDPASS CAVITIES

The Telewave TWPC-1008-1 and TWPC-1008-2 are 8" diameter, ¼-wavelength, high "Q" bandpass cavity filters with superior selectivity. Bandpass cavities reject all frequencies outside a narrow pass band. These cavities reduce transmitter sideband noise, and also protect receivers against desensitization.

TWPC-1008 cavities cover 88-108 MHz, and can be tuned at 50 or 75 ohms upon request. All cavities are tuned to specified frequencies prior to shipping, and no further adjustments should be required. The positive locking mechanism allows for quick field retuning if frequency changes become necessary.

These cavities feature calibrated adjustable coupling, and insertion loss can be easily set from 0.5 dB to 2 dB or more to improve selectivity. This allows cavity response to be optimized for any operating environment. At densely populated sites, the TWPC-1008-2 dual cavity filter provides greater selectivity with minimum insertion loss. Multiple cavities can also provide a wider passband when required. Mounting rails are provided for all multiple-cavity filters.

Excellent frequency stability is achieved by the use of a specially machined compensator and Invar rod. The pass frequency is temperature stable from -30°C to +70°C. Telewave Ground Loop technology places the center conductor of each coupling loop at DC ground potential for lightning protection and noise reduction.

Heavy duty materials are used throughout each cavity to insure high performance and long life. Cavity top plates are machined from 1/4-inch aluminum, and are heliarc welded to the cavity body at the high current point for improved conductivity and strength. This allows Telewave cavities to handle up to 350 watts, depending on insertion loss.

Rigid foam inserts support the tuner assembly allowing vertical or horizontal mounting. Similar metals and alodined aluminum help prevent galvanic corrosion. Silver plated tuners and beryllium copper finger stock provide non-corrosive low loss contact, and ensure reliable, long-term performance.

TWPC-1008-1

TWPC-1008-2

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88 - 108 MHz

TWPC-1008-1, 2

TYPICAL SELECTIVITY CHARACTERISTICS

Figure 1 TWPC-1008-1 SINGLE

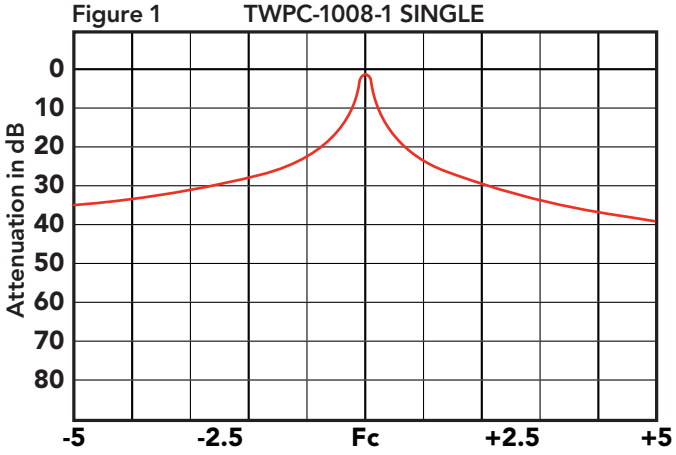
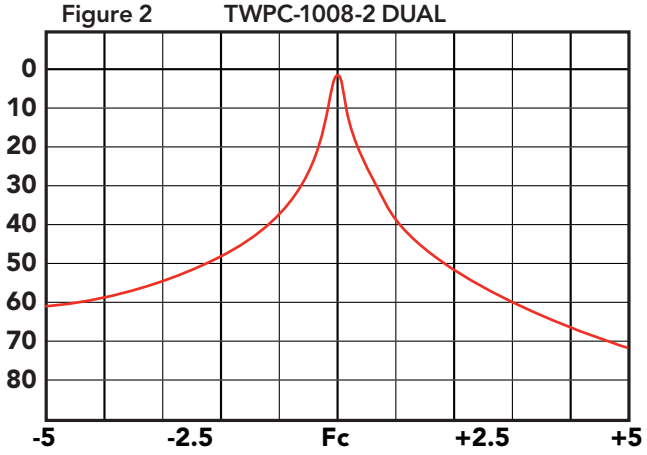


Figure 2 TWPC-1008-2 DUAL



Frequency (MHz)

MODEL	TWPC-1008-1	TWPC-1008-2
Insertion loss (adjustable)	0.5 to 2.0 dB	1.0 to 4.0 dB
Attenuation at 1dB insertion loss	See figure 1	See figure 2
Maximum dimensions with tuners extended in. (cm)	8 x 48 (20 x 123)	8.25 x 19 x 48 (20 x 48 x 123)
Net weight lb. (kg)	11 (5)	24 (10.9)
Shipping weight lb. (kg)	16 (7.3)	30 (13.6)

COMMON SPECIFICATIONS	
Tuning frequency range	88-108 MHz
Nominal impedance	50 ohms (75 ohm opt.)
VSWR at resonance (max)	1.5:1
Input power (max) vs. insertion loss	0.5 dB - 350 watts, 1 dB - 250 watts, 2 dB - 150 watts
Temperature range	-30°C to +70°C
Cavity electrical length	1/4 wavelength
Outer conductor, end plates	6061-T6 aluminum
Inner conductor, coupling loops	Silver plated copper
Tuning rod	Threaded Invar
Contactors, fingerstock	Beryllium copper
Cavity dimensions (Diam. x H) in. (cm)	8 x 36 (13 x 91)
Connectors	N or UHF female (opt.)
Finish	Gray acrylic enamel

NOTE: When ordering be sure to specify exact frequency and model number. Contact the factory if additional information or assistance is required.

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88 - 108 MHz

TPRC-1005-1, 2
PASS-REJECT CAVITIES

The Telewave TPRC-1005-1 and TPRC-1005-2 are 5" diameter, ¼-wavelength Pass-Reject cavities with an adjustable coupling loop and tuning capacitor. Pass-Reject cavities reject all frequencies outside a narrow pass band, with a tunable notch for additional protection with close spacing with close spacing. These cavities are commonly used to reduce transmitter sideband noise, and protect receivers against desensitization.

TPRC-1005 cavities cover 88-108 MHz, and can be tuned at 50 or 75 ohms upon request. All cavities are tuned to specified frequencies prior to shipping, and no further adjustments should be required. The positive locking mechanism allows for quick field retuning if frequency changes become necessary.

These cavities feature calibrated adjustable coupling, and insertion loss can be easily set from 0.5 dB to 2 dB or more to improve selectivity. This allows cavity response to be optimized for any operating environment. At densely populated sites, the TPRC-1005-2 dual cavity filter provides greater selectivity with minimum insertion loss. Multiple cavities can also provide a wider passband when required. Mounting rails are provided for all multiple-cavity filters.

Excellent frequency stability is achieved by the use of a specially machined compensator and Invar rod. The pass and reject frequencies are temperature stable from -30°C to +70°C. Telewave Ground Loop technology places the center conductor of each coupling loop at DC ground potential for lightning protection and noise reduction.

Heavy duty materials are used throughout each cavity to insure high performance and long life. Cavity top plates are machined from 1/4-inch aluminum, and are heliarc welded to the cavity body at the high current point for improved conductivity and strength. This allows Telewave cavities to handle up to 350 watts, depending on insertion loss.

Rigid foam inserts support the tuner assembly allowing vertical or horizontal mounting. Similar metals and alodined aluminum help prevent galvanic corrosion. Silver plated tuners and beryllium copper finger stock provide non-corrosive low loss contact, and ensure reliable, long-term performance.

TPRC-1005-1

TPRC-1005-2

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TWDS-5007 Rev. 12/06

TPRC-1005-1, 2

88 - 108 MHz

TYPICAL SELECTIVITY CHARACTERISTICS

Figure 1 TPRC-1005-1

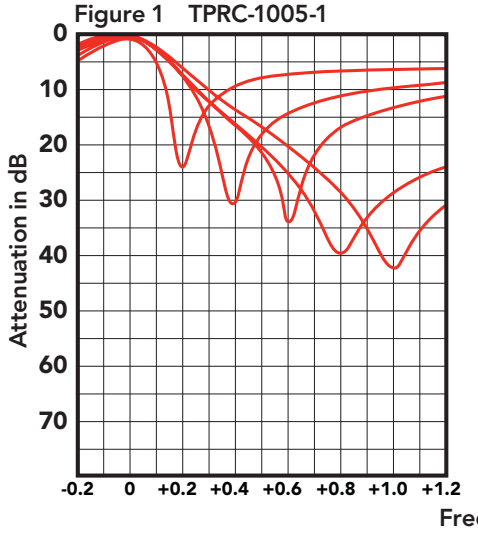
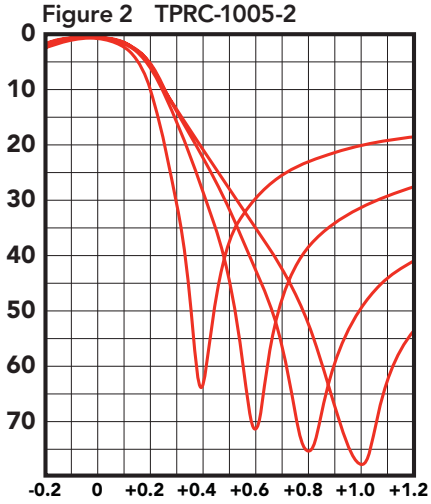


Figure 2 TPRC-1005-2



MODEL	TWPC-1005-1	TWPC-1005-2
Insertion loss (adjustable)	0.5 to 2.0 dB	1.0 to 4.0 dB
Attenuation at 1dB insertion loss	See figure 1	See figure 2
Maximum dimensions with tuners extended in. (cm)	5 x 46 (13 x 117)	5 x 19 x 46 (13 x 48 x 117)
Net weight lb. (kg)	8 (3.6)	19 (8.6)
Shipping weight lb. (kg)	11 (5)	25 (11.4)

COMMON SPECIFICATIONS	
Tuning frequency range	88-108 MHz
Nominal impedance	50 ohms (75 ohm opt.)
VSWR at resonance (max)	1.5:1
Input power (max) vs. insertion loss	0.5 dB - 350 watts, 1 dB - 250 watts, 2 dB - 150 watts
Temperature range	-30°C to +60°C
Cavity electrical length	1/4 wavelength
Outer conductor, end plates	6061-T6 aluminum
Inner conductor, coupling loops	Silver plated copper
Tuning rod	Threaded Invar
Contactors, fingerstock	Beryllium copper
Cavity dimensions (Diam. x H) in. (cm)	5 x 36 (13 x 91)
Connectors	N or UHF female (opt.)
Finish	Gray acrylic enamel

NOTE: Customized response curves are available to meet exact system requirements.

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88 - 108 MHz

TPRC-1008-1, 2
PASS-REJECT CAVITIES

The Telewave TPRC-1008-1 and TPRC-1008-2 are 8" diameter, ¼-wavelength Pass-Reject cavities with an adjustable coupling loop and tuning capacitor. Pass-Reject cavities reject all frequencies outside a narrow pass band, with a tunable notch for additional protection with close spacing. These cavities are commonly used to reduce transmitter sideband noise, and protect receivers against desensitization.

TPRC-1008 cavities cover 88-108 MHz, and can be tuned at 50 or 75 ohms upon request. All cavities are tuned to specified frequencies prior to shipping, and no further adjustments should be required. The positive locking mechanism allows for quick field retuning if frequency changes become necessary.

These cavities feature calibrated adjustable coupling, and insertion loss can be easily set from 0.5 dB to 2 dB or more to improve selectivity. This allows cavity response to be optimized for any operating environment. At densely populated sites, the TPRC-1008-2 dual cavity filter provides greater selectivity with minimum insertion loss. Multiple cavities can also provide a wider passband when required. Mounting rails are provided for all multiple-cavity filters.

Excellent frequency stability is achieved by the use of a specially machined compensator and Invar rod. The pass and reject frequencies are temperature stable from -30°C to +70°C. Telewave Ground Loop technology places the center conductor of each coupling loop at DC ground potential for lightning protection and noise reduction.

Heavy duty materials are used throughout each cavity to insure high performance and long life. Cavity top plates are machined from 1/4-inch aluminum, and are heliarc welded to the cavity body at the high current point for improved conductivity and strength. This allows Telewave cavities to handle up to 350 watts, depending on insertion loss.

Rigid foam inserts support the tuner assembly allowing vertical or horizontal mounting. Similar metals and alodined aluminum help prevent galvanic corrosion. Silver plated tuners and beryllium copper finger stock provide non-corrosive low loss contact, and ensure reliable, long-term performance.

TPRC-1008-1

TPRC-1008-2

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TWDS-5008 Rev. 12/06

88 - 108 MHz

TPRC-1008-1, 2

TYPICAL SELECTIVITY CHARACTERISTICS

Figure 1 TPRC-1008-1

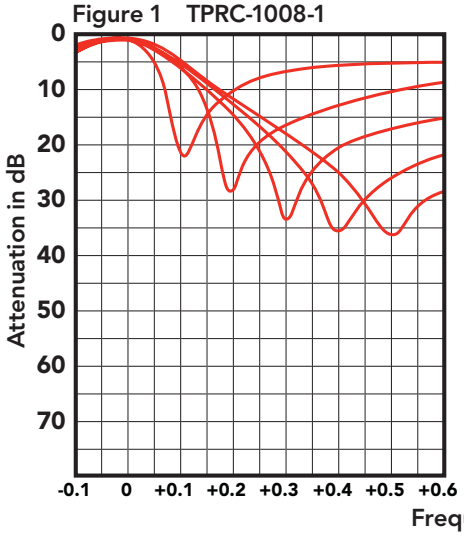
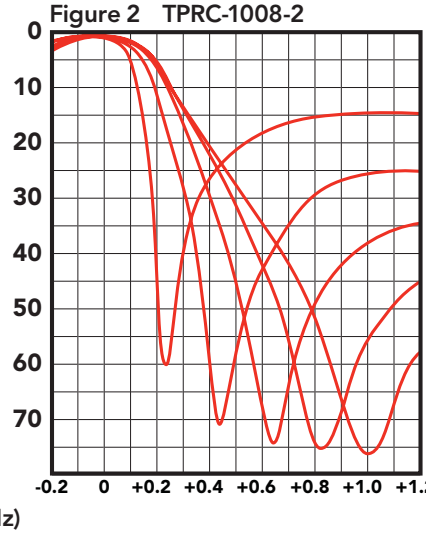


Figure 2 TPRC-1008-2



MODEL	TPRC-1008-1	TPRC-1008-2
Insertion loss (adjustable)	0.5 to 2.0 dB	1.0 to 4.0 dB
Attenuation at 1dB insertion loss	See figure 1	See figure 2
Maximum dimensions with tuners extended in. (cm)	8 x 46 (20 x 117)	8 x 19 x 46 (20 x 48 x 117)
Net weight lb. (kg)	12 (5.5)	13 (5.9)
Shipping weight lb. (kg)	18 (8.2)	40 (18.1)

COMMON SPECIFICATIONS	
Tuning frequency range	88-108 MHz
Nominal impedance	50 ohms
VSWR at resonance (max)	1.5:1
Input power (max) vs. insertion loss	0.5 dB - 350 watts, 1 dB - 250 watts, 2 dB - 150 watts
Temperature range	-30°C to +60°C
Cavity electrical length	1/4 wavelength
Outer conductor, end plates	6061-T6 aluminum
Inner conductor, coupling loops	Silver plated copper
Tuning rod	Invar
Contactors, fingerstock	Beryllium copper
Cavity dimensions (Diam. x H) in. (cm)	8 x 36 (13 x 91)
Connectors	N or UHF female (opt.)
Finish	Gray acrylic enamel

NOTE: Customized response curves are available to meet exact system requirements.

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88 - 108 MHz

TWNC-1005-1, 2
NOTCH CAVITIES

The Telewave TWNC-1005-1 and TWNC-1005-2 are 5" diameter, ¼-wavelength notch cavities with an adjustable coupling loop. Notch cavities are typically used together with Pass or Pass/Reject cavities to eliminate a particular frequency. Notch cavities have very low loss outside the notch band. Telewave can also "tilt" the notch response to move a notch very close to a pass frequency without adversely affecting the pass response.

TWNC-1005 cavities cover 88-108 MHz, and can be tuned at 50 or 75 ohms upon request. All cavities are tuned to specified frequencies prior to shipping, and no further adjustments should be required. The positive locking mechanism allows for quick field retuning if frequency changes become necessary.

These cavities feature calibrated adjustable coupling, and insertion loss can be easily set from 0.5 dB to 2 dB or more to improve notch depth. This allows cavity response to be optimized for any operating environment. At densely populated sites, the TWNC-1005-2 dual cavity filter provides a deeper notch with minimum insertion loss. Multiple cavities can also provide a wider passband when required. Mounting rails are provided for all multiple-cavity filters.

Excellent frequency stability is achieved by the use of a specially machined compensator and Invar rod. The notch frequency is temperature stable from -30°C to +70°C. Telewave Ground Loop technology places the center conductor of each coupling loop at DC ground potential for lightning protection and noise reduction.

Heavy duty materials are used throughout each cavity to insure high performance and long life. Cavity top plates are machined from 1/4-inch aluminum, and are heliarc welded to the cavity body at the high current point for improved conductivity and strength. This allows Telewave cavities to handle up to 350 watts, depending on insertion loss.

Rigid foam inserts support the tuner assembly allowing vertical or horizontal mounting. Similar metals and alodined aluminum help prevent galvanic corrosion. Silver plated tuners and beryllium copper finger stock provide non-corrosive low loss contact, and ensure reliable, long-term performance.

TWNC-1005-1

TWNC-1005-2

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TWDS-5009 Rev. 12/06

88 - 108 MHz

TWNC-1005-1, 2

TYPICAL SELECTIVITY CHARACTERISTICS

Figure 1 TWNC-1005-1

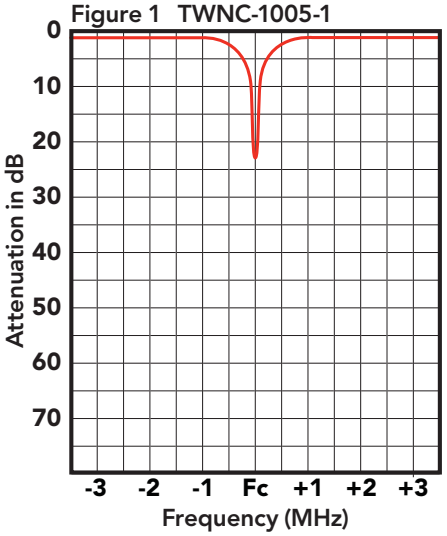
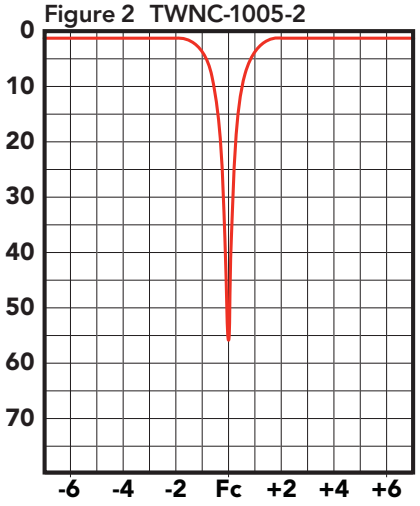


Figure 2 TWNC-1005-2



MODEL	TWNC-1005-1	TWNC-1005-2
Insertion loss (adjustable)	0.5 to 2.0 dB	1.0 to 4.0 dB
Attenuation at 1dB insertion loss	See figure 1	See figure 2
Maximum dimensions with tuners extended in. (cm)	5 x 46 (13 x 117)	5 x 19 x 46 (13 x 48 x 117)
Net weight lb. (kg)	8 (3.6)	19 (8.6)
Shipping weight lb. (kg)	11 (5)	25 (11.4)

COMMON SPECIFICATIONS	
Tuning frequency range	88-108 MHz
Nominal impedance	50 ohms (75 ohm opt.)
VSWR at resonance (max)	1.5:1
Input power (max) vs. insertion loss	0.5 dB - 350 watts, 1 dB - 250 watts, 2 dB - 150 watts
Temperature range	-30°C to +60°C
Cavity electrical length	1/4 wavelength
Outer conductor, end plates	6061-T6 aluminum
Inner conductor, coupling loops	Silver plated copper
Tuning rod	Invar
Contactors, fingerstock	Beryllium copper
Cavity dimensions (Diam. x H) in. (cm)	5 x 36 (13 x 91)
Connectors	N or UHF female (opt.)
Finish	Gray acrylic enamel

NOTE: Pass cavities are also available in 8" and 10" diameter
Customized response curves are available to meet exact system requirements.
Contact Telewave for recommendations on your specific design.

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88 - 108 MHz

TWNC-1008-1, 2
NOTCH CAVITIES

The Telewave TWNC-1008-1 and TWNC-1008-2 are 5" diameter, ¼-wavelength notch cavities with an adjustable coupling loop. Notch cavities are typically used together with Pass or Pass/Reject cavities to eliminate a particular frequency. Notch cavities have very low loss outside the notch band. Telewave can also "tilt" the notch response to move a notch very close to a pass frequency without adversely affecting the pass response.

TWNC-1008 cavities cover 88-108 MHz, and can be tuned at 50 or 75 ohms upon request. All cavities are tuned to specified frequencies prior to shipping, and no further adjustments should be required. The positive locking mechanism allows for quick field retuning if frequency changes become necessary.

These cavities feature calibrated adjustable coupling, and insertion loss can be easily set from 0.5 dB to 2 dB or more to improve selectivity. This allows cavity response to be optimized for any operating environment. At densely populated sites, the TWNC-1008-2 dual cavity filter provides a deeper notch with minimum insertion loss. Multiple cavities can also provide a wider notch when required. Mounting rails are provided for all multiple-cavity filters.

Excellent frequency stability is achieved by the use of a specially machined compensator and Invar rod. The notch frequency is temperature stable from -30°C to +70°C. Telewave Ground Loop technology places the center conductor of each coupling loop at DC ground potential for lightning protection and noise reduction.

Heavy duty materials are used throughout each cavity to insure high performance and long life. Cavity top plates are machined from 1/4-inch aluminum, and are heliarc welded to the cavity body at the high current point for improved conductivity and strength. This allows Telewave cavities to handle up to 350 watts, depending on insertion loss.

Rigid foam inserts support the tuner assembly allowing vertical or horizontal mounting. Similar metals and alodined aluminum help prevent galvanic corrosion. Silver plated tuners and beryllium copper finger stock provide non-corrosive low loss contact, and ensure reliable, long-term performance.

TWNC-1008-1

TWNC-1008-2

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TWNC-1008-1, 2

88 - 108 MHz

TYPICAL SELECTIVITY CHARACTERISTICS

Figure 1 TWNC-1008-1

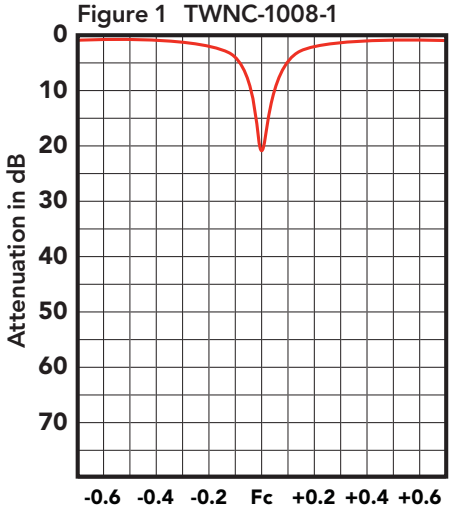
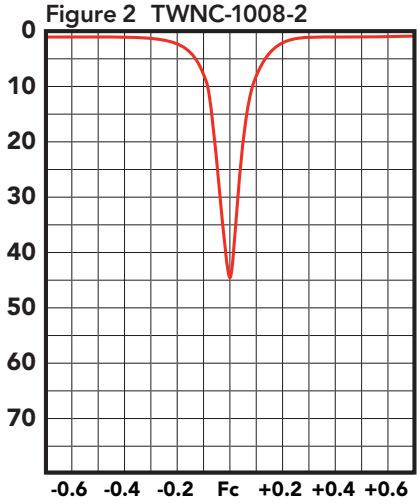


Figure 2 TWNC-1008-2



Frequency (MHz)

MODEL	TWNC-1008-1	TWNC-1008-2
Insertion loss (adjustable)	0.5 to 2.0 dB	1.0 to 4.0 dB
Attenuation at 1dB insertion loss	See figure 1	See figure 2
Maximum dimensions with tuners extended in. (cm)	8 x 46 (20.3 x 117)	8 x 19 x 46 (20 x 48 x 117)
Net weight lb. (kg)	12 (5.5)	13 (5.9)
Shipping weight lb. (kg)	18 (8.2)	40 (18.1)

COMMON SPECIFICATIONS	
Tuning frequency range	88-108 MHz
Nominal impedance	50 ohms (75 ohm opt.)
VSWR at resonance (max)	1.5:1
Input power (max) vs. insertion loss	0.5 dB - 350 watts, 1 dB - 250 watts, 2 dB - 150 watts
Temperature range	-30°C to +60°C
Cavity electrical length	1/4 wavelength
Outer conductor, end plates	6061-T6 aluminum
Inner conductor, coupling loops	Silver plated copper
Tuning rod	Invar
Contactors, fingerstock	Beryllium copper
Cavity dimensions (Diam. x H) in. (cm)	8 x 36 (20 x 91)
Connectors	N or UHF female (opt.)
Finish	Gray acrylic enamel

NOTE: Pass cavities are also available in 8" and 10" diameter
Customized response curves are available to meet exact system requirements.
Contact Telewave for recommendations on your specific design.

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118 - 148 MHz

TWPC-1405-1, 2, 3
BANDPASS CAVITIES

TWPC-1405-1

TWPC-1405-2

TWPC-1405-3

The Telewave TWPC-1405-1, -2, and -3 are 5" diameter, ¼-wavelength, high "Q" bandpass cavity filters with superior selectivity. Bandpass cavities reject all frequencies outside a narrow pass band. These cavities reduce transmitter sideband noise, and also protect receivers against desensitization.

TWPC-1405 cavities cover 118-148 MHz. All cavities are tuned to specified frequencies prior to shipping, and no further adjustments should be required. The positive locking mechanism allows for quick field retuning if frequency changes become necessary.

These cavities also feature calibrated adjustable coupling, and insertion loss can be easily set from 0.5 dB to 2 dB or more to improve selectivity. This allows cavity response to be optimized for any operating environment. At densely populated sites, the 1405-2 or 1405-3 cavity filters provide greater selectivity with minimum insertion loss. Multiple cavities can also provide a wider passband when required. Mounting rails are provided for all multiple-cavity filters.

Excellent frequency stability is achieved by the use of a specially machined compensator and Invar rod. The pass frequency is temperature stable from -30°C to +70°C. Telewave Ground Loop technology places the center conductor of each coupling loop at DC ground potential for lightning protection and noise reduction.

Heavy duty materials are used throughout each cavity to insure high performance and long life. Cavity top plates are machined from 1/4-inch aluminum, and are heliarc welded to the cavity body at the high current point for improved conductivity and strength. This allows Telewave cavities to handle up to 350 watts, depending on insertion loss.

Rigid foam inserts support the tuner assembly allowing vertical or horizontal mounting. Similar metals and alodined aluminum help prevent galvanic corrosion. Silver plated tuners and beryllium copper finger stock provide non-corrosive low loss contact, and ensure reliable, long-term performance.

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TWPC-1405-1, 2, 3

118 - 148 MHz

TYPICAL SELECTIVITY CHARACTERISTICS

Figure 1
TWPC-1405-1 SINGLE

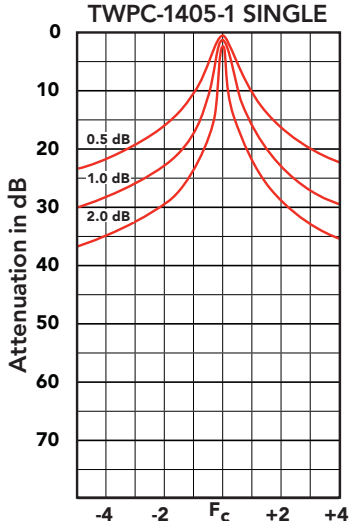


Figure 2
TWPC-1405-2 DUAL

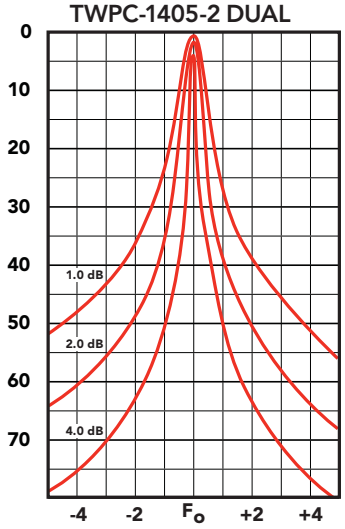
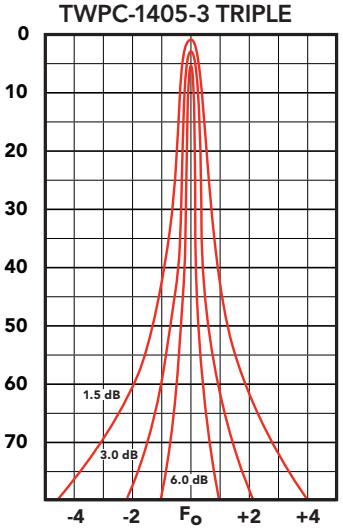


Figure 3
TWPC-1405-3 TRIPLE



MODEL	TWPC-1405-1	TWPC-1405-2	TWPC-1405-3
Insertion loss (adjustable)	0.5 to 2.0 dB	1.0 to 4.0 dB	1.5 to 6.0 dB
Attenuation	See figure 1	See figure 2	See figure 3
Maximum dimensions with tuners extended in. (cm)	5 x 35 (13 x 89)	5.25 x 19 x 35 (13 x 48 x 89)	5.25 x 19 x 35 (13 x 48 x 89)
Net weight lb. (kg)	6 (2.7)	12.5 (5.7)	20 (9.1)
Shipping weight lb. (kg)	9 (4.1)	15.5 (7)	23 (10.4)

COMMON SPECIFICATIONS	
Tuning frequency range	118-148 MHz
Nominal impedance	50 ohms
VSWR at resonance (max)	1.5:1
Input power (max) vs. insertion loss	0.5 dB - 350 watts, 1 dB - 250 watts, 2 dB - 150 watts
Temperature range	-30°C to +70°C
Cavity electrical length	¼ wavelength
Outer conductor, end plates	6061-T6 aluminum
Inner conductor, coupling loops	Silver plated copper
Tuning rod	Invar
Contactors, fingerstock	Beryllium copper
Cavity dimensions (Diam. x H) in. (cm)	5 x 30 (13 x 76)
Connectors	N or UHF female (opt.)
Finish	Gray acrylic enamel

NOTE: When ordering be sure to specify exact frequency and model number. Contact the factory if additional information or assistance is required.

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118 - 148 MHz

TWPC-1408-1, 2
BANDPASS CAVITIES

TWPC-1408-1

TWPC-1408-2

The Telewave TWPC-1408-1 and 1408-2 are 8" diameter, ¼-wavelength, high "Q" bandpass cavity filters with superior selectivity. Bandpass cavities reject all frequencies outside a narrow pass band. These cavities reduce transmitter sideband noise, and also protect receivers against desensitization.

TWPC-1408 cavities cover 118-148 MHz. All cavities are tuned to specified frequencies prior to shipping, and no further adjustments should be required. The positive locking mechanism allows for quick field retuning if frequency changes become necessary.

These cavities also feature calibrated adjustable coupling, and insertion loss can be easily set from 0.5 dB to 2 dB or more to improve selectivity. This allows cavity response to be optimized for any operating environment. At densely populated sites, the 1408-2 cavity filters provide greater selectivity with minimum insertion loss. Multiple cavities can also provide a wider passband when required. Mounting rails are provided for all multiple-cavity filters.

Excellent frequency stability is achieved by the use of a specially machined compensator and Invar rod. The pass frequency is temperature stable from -30°C to +70°C. Telewave Ground Loop technology places the center conductor of each coupling loop at DC ground potential for lightning protection and noise reduction.

Heavy duty materials are used throughout each cavity to insure high performance and long life. Cavity top plates are machined from 1/4-inch aluminum, and are heliarc welded to the cavity body at the high current point for improved conductivity and strength. This allows Telewave cavities to handle up to 350 watts, depending on insertion loss.

Rigid foam inserts support the tuner assembly allowing vertical or horizontal mounting. Similar metals and alodined aluminum help prevent galvanic corrosion. Silver plated tuners and beryllium copper finger stock provide non-corrosive low loss contact, and ensure reliable, long-term performance.

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TWPC-1408-1, 2

118 - 148 MHz

TYPICAL SELECTIVITY CHARACTERISTICS

Figure 1 TWPC-1408-1 SINGLE

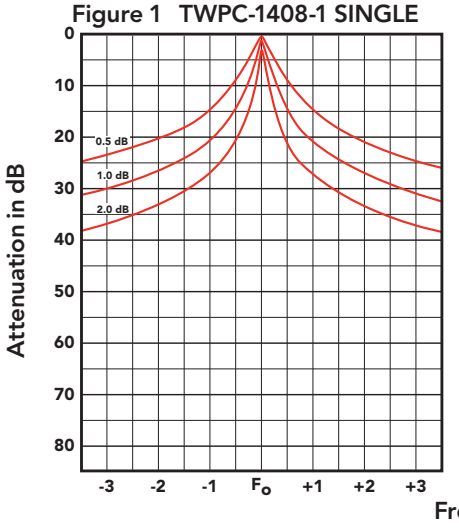
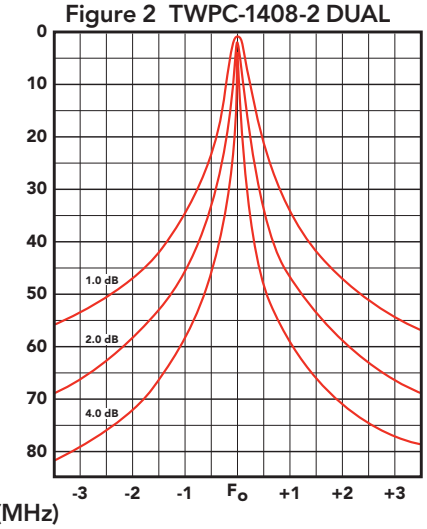


Figure 2 TWPC-1408-2 DUAL



MODEL	TWPC-1408-1	TWPC-1408-2
Insertion loss (adjustable)	0.5 to 2.0 dB	1.0 to 4.0 dB
Attenuation	See figure 1	See figure 2
Maximum dimensions with tuners extended in. (cm)	8 x 36 (25 x 91)	8 x 19 x 36 (25 x 48 x 91)
Net weight lb. (kg)	8.5 (3.9)	19 (8.6)
Shipping weight lb. (kg)	13 (5.9)	22 (10)

COMMON SPECIFICATIONS	
Tuning frequency range	118-148 MHz
Nominal impedance	50 ohms
VSWR at resonance (max)	1.5:1
Input power (max) vs. insertion loss	0.5 dB - 350 watts, 1 dB - 250 watts, 2 dB - 150 watts
Temperature range	-30°C to +70°C
Cavity electrical length	¼ wavelength
Outer conductor, end plates	6061-T6 aluminum
Inner conductor, coupling loops	Silver plated copper
Tuning rod	Invar
Contactors, fingerstock	Beryllium copper
Cavity dimensions (Diam. x H) in. (cm)	8 x 30 (20 x 76)
Connectors	N or UHF female (opt.)
Finish	Gray acrylic enamel

NOTE: When ordering be sure to specify exact frequency and model number. Contact the factory if additional information or assistance is required.

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TWDS-5031 Rev. 12/06

118 - 148 MHz

TWPC-1410-1, -2
BANDPASS CAVITIES

TWPC-1410-1

TWPC-1410-2

The Telewave TWPC-1410-1 and 1410-2 are 10" diameter, ¼-wavelength, high "Q" bandpass cavity filters with superior selectivity. Bandpass cavities reject all frequencies outside a narrow pass band. These cavities reduce transmitter sideband noise, and also protect receivers against desensitization.

TWPC-1410 cavities cover 118-148 MHz. All cavities are tuned to specified frequencies prior to shipping, and no further adjustments should be required. The positive locking mechanism allows for quick field retuning if frequency changes become necessary.

These cavities also feature calibrated adjustable coupling, and insertion loss can be easily set from 0.5 dB to 2 dB or more to improve selectivity. This allows cavity response to be optimized for any operating environment. At densely populated sites, the 1410-2 cavity filters provide greater selectivity with minimum insertion loss. Multiple cavities can also provide a wider passband when required. Mounting rails are provided for all multiple-cavity filters.

Excellent frequency stability is achieved by the use of a specially machined compensator and Invar rod. The pass frequency is temperature stable from -30°C to +70°C. Telewave Ground Loop technology places the center conductor of each coupling loop at DC ground potential for lightning protection and noise reduction.

Heavy duty materials are used throughout each cavity to insure high performance and long life. Cavity top plates are machined from 1/4-inch aluminum, and are heliarc welded to the cavity body at the high current point for improved conductivity and strength. This allows Telewave cavities to handle up to 350 watts, depending on insertion loss.

Rigid foam inserts support the tuner assembly allowing vertical or horizontal mounting. Similar metals and alodined aluminum help prevent galvanic corrosion. Silver plated tuners and beryllium copper finger stock provide non-corrosive low loss contact, and ensure reliable, long-term performance.

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TWPC-1410-1, -2

118 - 148 MHz

TYPICAL SELECTIVITY CHARACTERISTICS

Figure 1 TWPC-1410-1 SINGLE

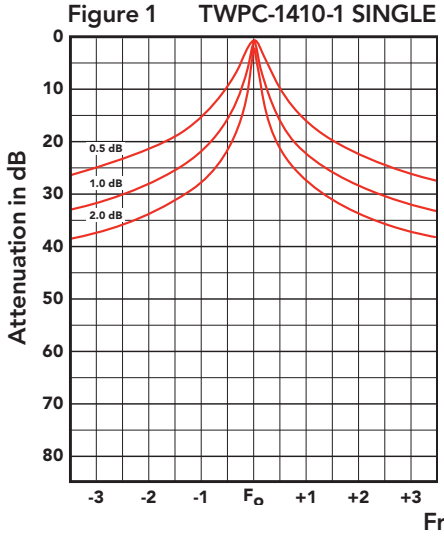
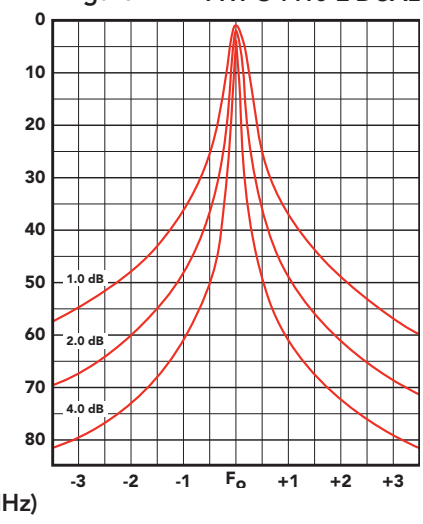


Figure 2 TWPC-1410-2 DUAL



MODEL	TWPC-1410-1	TWPC-1410-2
Insertion loss (adjustable)	0.5 to 2.0 dB	1.0 to 4.0 dB
Attenuation	See figure 1	See figure 2
Maximum dimensions with tuners extended in. (cm)	10 x 32 (26 x 81)	10.25 x 20 x 32 (26 x 51 x 81.3)
Net weight lb. (kg)	11 (5)	22 (10)
Shipping weight lb. (kg)	14 (6.4)	28 (12.8)

COMMON SPECIFICATIONS	
Tuning frequency range	118-148 MHz
Nominal impedance	50 ohms
VSWR at resonance (max)	1.5:1
Input power (max) vs. insertion loss	0.5 dB - 350 watts, 1 dB - 250 watts, 2 dB - 150 watts
Temperature range	-30°C to +70°C
Cavity electrical length	¼ wavelength
Outer conductor, end plates	6061-T6 aluminum
Inner conductor, coupling loops	Silver plated copper
Tuning rod	Invar
Contactors, fingerstock	Beryllium copper
Cavity dimensions (Diam. x H) in. (cm)	10 x 30 (26 x 76)
Connectors	N or UHF female (opt.)
Finish	Gray acrylic enamel

NOTE: When ordering be sure to specify exact frequency and model number. Contact the factory if additional information or assistance is required.

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118 - 148 MHz

TPRC-1405-1,2
PASS/REJECT CAVITIES

TPRC-1405-1

TPRC-1405-2

The Telewave TPRC-1405-1 and 1405-2 are 5" diameter, ¼-wavelength Pass-Reject cavities with an adjustable coupling loop and tuning capacitor. Pass-Reject cavities reject all frequencies outside a narrow pass band, with a tunable notch for additional protection with close spacing. These cavities are commonly used to reduce transmitter sideband noise, and protect receivers against desensitization.

TPRC-1405 cavities cover 118-148 MHz. All cavities are tuned to specified frequencies prior to shipping, and no further adjustments should be required. The positive locking mechanism allows for quick field re-tuning if frequency changes become necessary.

These cavities feature calibrated adjustable coupling, and insertion loss can be easily set from 0.5 dB to 2 dB or more to improve selectivity. This allows cavity response to be optimized for any operating environment. At densely populated sites, the TPRC-1405-2 dual cavity filter provides greater selectivity with minimum insertion loss. Multiple cavities can also provide a wider passband when required. Mounting rails are provided for all multiple-cavity filters.

Excellent frequency stability is achieved by the use of a specially machined compensator and Invar rod. The pass and reject frequencies are temperature stable from -30°C to +70°C. Telewave Ground Loop technology places the center conductor of each coupling loop at DC ground potential for lightning protection and noise reduction.

Heavy duty materials are used throughout each cavity to insure high performance and long life. Cavity top plates are machined from 1/4-inch aluminum, and are heliarc welded to the cavity body at the high current point for improved conductivity and strength. This allows Telewave cavities to handle up to 350 watts, depending on insertion loss.

Rigid foam inserts support the tuner assembly allowing vertical or horizontal mounting. Similar metals and alodined aluminum help prevent galvanic corrosion. Silver plated tuners and beryllium copper finger stock provide non-corrosive low loss contact, and ensure reliable, long-term performance.

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TWDS-5020 Rev. 12/06

TPRC-1405-1,2

118 - 148 MHz

TYPICAL SELECTIVITY CHARACTERISTICS

Figure 1 - Single, 0.5 dB ins. loss

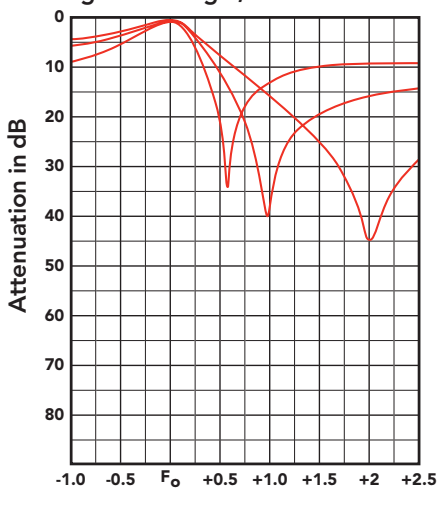
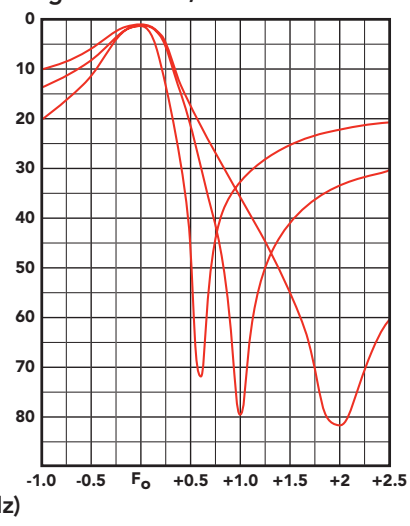


Figure 2 - Dual, 1 dB ins. loss



Frequency (MHz)

MODEL	TPRC-1405-1	TPRC-1405-2
Insertion loss (adjustable)	0.5 to 2.0 dB	1.0 to 4.0 dB
Attenuation	See figure 1	See figure 2
Maximum dimensions with tuners extended in. (cm)	5 x 35 (13 x 89)	5.25 x 19 x 35 (13 x 48 x 89)
Net weight lb. (kg)	6 (2.7)	12.5 (5.7)
Shipping weight lb. (kg)	9 (4.1)	15.5 (7)

COMMON SPECIFICATIONS	
Tuning frequency range	118-148 MHz
Nominal impedance	50 ohms
VSWR at resonance (max)	1.5:1
Input power (max) vs. insertion loss	0.5 dB - 350 watts, 1 dB - 250 watts, 2 dB - 150 watts
Temperature range	-30°C to +70°C
Cavity electrical length	¼ wavelength
Outer conductor, end plates	6061-T6 aluminum
Inner conductor, coupling loops	Silver plated copper
Tuning rod	Invar
Contactors, fingerstock	Beryllium copper
Cavity dimensions (Diam. x H) in. (cm)	5 x 30 (13 x 76)
Connectors	N or UHF female (opt.)
Finish	Gray acrylic enamel

NOTE: When ordering be sure to specify exact frequency and model number. Contact the factory if additional information or assistance is required.

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TWDS-5020 Rev. 12/06

148 - 174 MHz

TWPC-1505-1, 2, 3
BANDPASS CAVITIES

TWPC-1505-1

TWPC-1505-2

TWPC-1505-3

The Telewave TWPC-1505-1 and 1505-2 are 5" diameter, ¼-wavelength, high "Q" bandpass cavity filters with superior selectivity. Bandpass cavities reject all frequencies outside a narrow pass band. These cavities reduce transmitter sideband noise, and also protect receivers against desensitization.

TWPC-1505 cavities cover 148-174 MHz. All cavities are tuned to specified frequencies prior to shipping, and no further adjustments should be required. The positive locking mechanism allows for quick field retuning if frequency changes become necessary.

These cavities also feature calibrated adjustable coupling, and insertion loss can be easily set from 0.5 dB to 2 dB or more to improve selectivity. This allows cavity response to be optimized for any operating environment. At densely populated sites, the 1505-2 cavity filters provide greater selectivity with minimum insertion loss. Multiple cavities can also provide a wider passband when required. Mounting rails are provided for all multiple-cavity filters.

Excellent frequency stability is achieved by the use of a specially machined compensator and Invar rod. The pass frequency is temperature stable from -30°C to +70°C. Telewave Ground Loop technology places the center conductor of each coupling loop at DC ground potential for lightning protection and noise reduction.

Heavy duty materials are used throughout each cavity to insure high performance and long life. Cavity top plates are machined from 1/4-inch aluminum, and are heliarc welded to the cavity body at the high current point for improved conductivity and strength. This allows Telewave cavities to handle up to 350 watts, depending on insertion loss.

Rigid foam inserts support the tuner assembly allowing vertical or horizontal mounting. Similar metals and alodined aluminum help prevent galvanic corrosion. Silver plated tuners and beryllium copper finger stock provide non-corrosive low loss contact, and ensure reliable, long-term performance.

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TWDS-5012 Rev. 12/06

148 - 174 MHz

TWPC-1505-1, 2, 3

TYPICAL SELECTIVITY CHARACTERISTICS

Figure 1

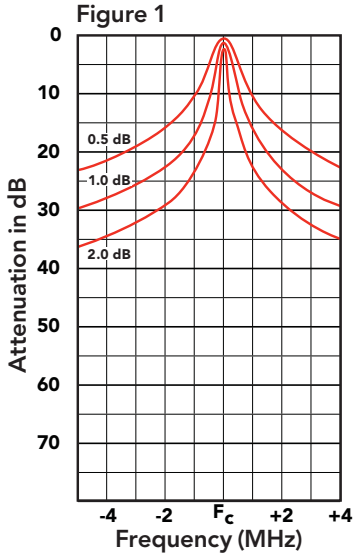


Figure 2

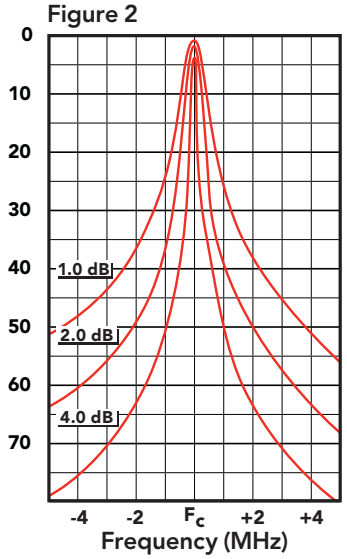
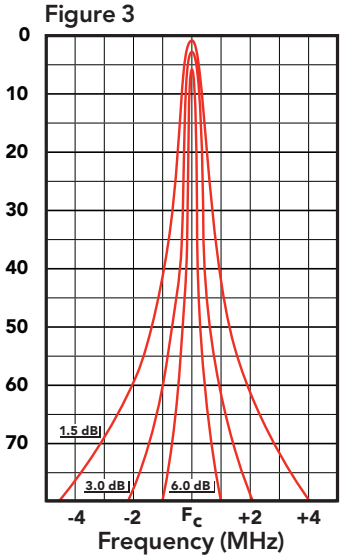


Figure 3



MODEL	TWPC-1505	TWPC-1505-2	TWPC-1505-3
Insertion loss (adjustable)	0.5 to 2.0 dB	1.0 to 4.0 dB	1.5 to 6.0 dB
Attenuation	See figure 1	See figure 2	See figure 3
Maximum dimensions with tuners extended in. (cm)	5 x 28 (13 x 71)	5.25 x 19 x 28 (13 x 48 x 71)	5.25 x 19 x 28 (13 x 48 x 71)
Net weight lb. (kg)	5 (2.3)	11 (5)	15 (7)
Shipping weight lb. (kg)	8 (3.6)	14 (6.5)	18 (8.1)

COMMON SPECIFICATIONS	
Tuning frequency range	148-174 MHz
Nominal impedance	50 ohms
VSWR at resonance (max)	1.5:1
Input power (max) vs. insertion loss	0.5 dB - 350 watts, 1 dB - 250 watts, 2 dB - 150 watts
Temperature range	-30°C to +70°C
Cavity electrical length	¼ wavelength
Outer conductor, end plates	6061-T6 aluminum
Inner conductor, coupling loops	Silver plated copper
Tuning rod	Invar
Contactors, fingerstock	Beryllium copper
Cavity dimensions (Diam. x H) in. (cm)	5 x 23.5 (13 x 60)
Connectors	N or UHF female (opt.)
Finish	Gray acrylic enamel

NOTE: When ordering be sure to specify exact frequency and model number. Contact the factory if additional information or assistance is required.

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148 - 174 MHz

TWPC-1508-1, 2
BANDPASS CAVITIES

TWPC-1508-1

TWPC-1508-2

The Telewave TWPC-1508-1 and 1508-2 are 8" diameter, ¼-wavelength, high "Q" bandpass cavity filters with superior selectivity. Bandpass cavities reject all frequencies outside a narrow pass band. These cavities reduce transmitter sideband noise, and also protect receivers against desensitization.

TWPC-1508 cavities cover 148-174 MHz. All cavities are tuned to specified frequencies prior to shipping, and no further adjustments should be required. The positive locking mechanism allows for quick field retuning if frequency changes become necessary.

These cavities also feature calibrated adjustable coupling, and insertion loss can be easily set from 0.5 dB to 2 dB or more to improve selectivity. This allows cavity response to be optimized for any operating environment. At densely populated sites, the 1508-2 cavity filters provide greater selectivity with minimum insertion loss. Multiple cavities can also provide a wider passband when required. Mounting rails are provided for all multiple-cavity filters.

Excellent frequency stability is achieved by the use of a specially machined compensator and Invar rod. The pass frequency is temperature stable from -30°C to +70°C. Telewave Ground Loop technology places the center conductor of each coupling loop at DC ground potential for lightning protection and noise reduction.

Heavy duty materials are used throughout each cavity to insure high performance and long life. Cavity top plates are machined from 1/4-inch aluminum, and are heliarc welded to the cavity body at the high current point for improved conductivity and strength. This allows Telewave cavities to handle up to 350 watts, depending on insertion loss.

Rigid foam inserts support the tuner assembly allowing vertical or horizontal mounting. Similar metals and alodined aluminum help prevent galvanic corrosion. Silver plated tuners and beryllium copper finger stock provide non-corrosive low loss contact, and ensure reliable, long-term performance.

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TWDS-5013 Rev. 12/06

TWPC-1508-1, 2

148 - 174 MHz

TYPICAL SELECTIVITY CHARACTERISTICS

Figure 1

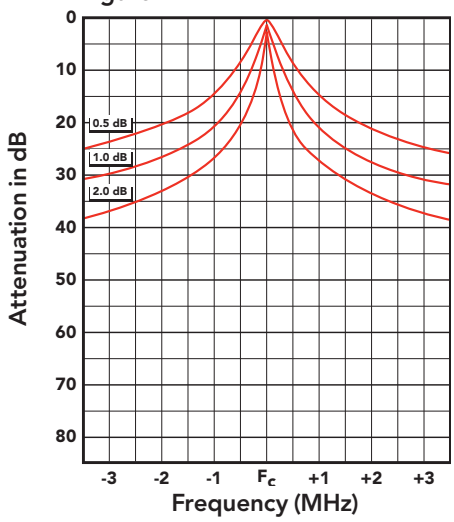
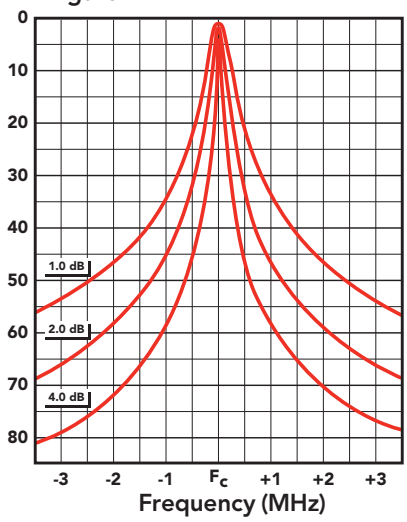


Figure 2



MODEL	TWPC-1508-1	TWPC-1508-2
Insertion loss (adjustable)	0.5 to 2.0 dB	1.0 to 4.0 dB
Attenuation	See figure 1	See figure 2
Maximum dimensions with tuners extended in. (cm)	8 x 28 (20.3 x 71)	8 x 19 x 28 (20.3 x 48 x 71)
Net weight lb. (kg)	7.5 (3.4)	17 (7.7)
Shipping weight lb. (kg)	11 (5)	20 (9.1)

COMMON SPECIFICATIONS	
Tuning frequency range	148-174 MHz
Nominal impedance	50 ohms
VSWR at resonance (max)	1.5:1
Input power (max) vs. insertion loss	0.5 dB - 350 watts, 1 dB - 250 watts, 2 dB - 150 watts
Temperature range	-30°C to +70°C
Cavity electrical length	1/4 wavelength
Outer conductor, end plates	6061-T6 aluminum
Inner conductor, coupling loops	Silver plated copper
Tuning rod	Invar
Contactors, fingerstock	Beryllium copper
Cavity dimensions (Diam. x H) in. (cm)	8 x 23.5 (20 x 60)
Connectors	N or UHF female (opt.)
Finish	Gray acrylic enamel

NOTE: When ordering be sure to specify exact frequency and model number. Contact the factory if additional information or assistance is required.

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148 - 174 MHz

TWPC-1510-1, 2
BANDPASS CAVITIES

TWPC-1510-1

TWPC-1510-2

The Telewave TWPC-1510-1 and 1510-2 are 10" diameter, ¼-wavelength, high "Q" bandpass cavity filters with superior selectivity. Bandpass cavities reject all frequencies outside a narrow pass band. These cavities reduce transmitter sideband noise, and also protect receivers against desensitization.

TWPC-1510 cavities cover 148-174 MHz. All cavities are tuned to specified frequencies prior to shipping, and no further adjustments should be required. The positive locking mechanism allows for quick field retuning if frequency changes become necessary.

These cavities also feature calibrated adjustable coupling, and insertion loss can be easily set from 0.5 dB to 2 dB or more to improve selectivity. This allows cavity response to be optimized for any operating environment. At densely populated sites, the 1510-2 cavity filters provide greater selectivity with minimum insertion loss. Multiple cavities can also provide a wider passband when required. Mounting rails are provided for all multiple-cavity filters.

Excellent frequency stability is achieved by the use of a specially machined compensator and Invar rod. The pass frequency is temperature stable from -30°C to +70°C. Telewave Ground Loop technology places the center conductor of each coupling loop at DC ground potential for lightning protection and noise reduction.

Heavy duty materials are used throughout each cavity to insure high performance and long life. Cavity top plates are machined from 1/4-inch aluminum, and are heliarc welded to the cavity body at the high current point for improved conductivity and strength. This allows Telewave cavities to handle up to 350 watts, depending on insertion loss.

Rigid foam inserts support the tuner assembly allowing vertical or horizontal mounting. Similar metals and alodined aluminum help prevent galvanic corrosion. Silver plated tuners and beryllium copper finger stock provide non-corrosive low loss contact, and ensure reliable, long-term performance.

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TWDS-5006 Rev. 12/06

TWPC-1510-1, 2

148 - 174 MHz

TYPICAL SELECTIVITY CHARACTERISTICS

Figure 1

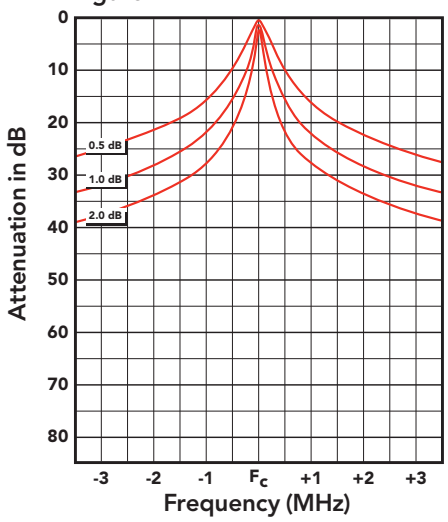
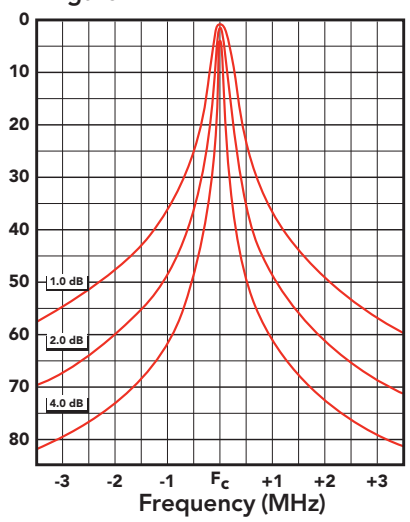


Figure 2



MODEL	TWPC-1510-1	TWPC-1510-2
Insertion loss (adjustable)	0.5 to 2.0 dB	1.0 to 4.0 dB
Attenuation	See figure 1	See figure 2
Maximum dimensions with tuners extended in. (cm)	10 x 28 (25 x 71)	20 x 19 x 28 (50 x 48 x 71)
Net weight lb. (kg)	10 (4.6)	21.5 (9.8)
Shipping weight lb. (kg)	13 (6)	24 (10.9)

COMMON SPECIFICATIONS	
Tuning frequency range	148-174 MHz
Nominal impedance	50 ohms
VSWR at resonance (max)	1.5:1
Input power (max) vs. insertion loss	0.5 dB - 350 watts, 1 dB - 250 watts, 2 dB - 150 watts
Temperature range	-30°C to +70°C
Cavity electrical length	¼ wavelength
Outer conductor, end plates	6061-T6 aluminum
Inner conductor, coupling loops	Silver plated copper
Tuning rod	Invar
Contactors, fingerstock	Beryllium copper
Cavity dimensions (Diam. x H) in. (cm)	10 x 23.5 (25 x 60)
Connectors	N or UHF female (opt.)
Finish	Gray acrylic enamel

NOTE: When ordering be sure to specify exact frequency and model number. Contact the factory if additional information or assistance is required.

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148 - 174 MHz

TPRC-1505-1,2
PASS-REJECT CAVITIES

TPRC-1505-1

TPRC-1505-2

The Telewave TPRC-1505-1 and 1505-2 are 5" diameter, ¼-wavelength Pass-Reject cavities with an adjustable coupling loop and tuning capacitor. Pass-Reject cavities reject all frequencies outside a narrow pass band, with a tunable notch for additional protection with close spacing. These cavities are commonly used to reduce transmitter sideband noise, and protect receivers against desensitization.

TPRC-1505 cavities cover 148-174 MHz. All cavities are tuned to specified frequencies prior to shipping, and no further adjustments should be required. The positive locking mechanism allows for quick field re-tuning if frequency changes become necessary.

These cavities feature calibrated adjustable coupling, and insertion loss can be easily set from 0.5 dB to 2 dB or more to improve selectivity. This allows cavity response to be optimized for any operating environment. At densely populated sites, the TPRC-1505-2 dual cavity filter provides greater selectivity with minimum insertion loss. Multiple cavities can also provide a wider passband when required. Mounting rails are provided for all multiple-cavity filters.

Excellent frequency stability is achieved by the use of a specially machined compensator and Invar rod. The pass and reject frequencies are temperature stable from -30°C to +70°C. Telewave Ground Loop technology places the center conductor of each coupling loop at DC ground potential for lightning protection and noise reduction.

Heavy duty materials are used throughout each cavity to insure high performance and long life. Cavity top plates are machined from 1/4-inch aluminum, and are heliarc welded to the cavity body at the high current point for improved conductivity and strength. This allows Telewave cavities to handle up to 350 watts, depending on insertion loss.

Rigid foam inserts support the tuner assembly allowing vertical or horizontal mounting. Similar metals and alodined aluminum help prevent galvanic corrosion. Silver plated tuners and beryllium copper finger stock provide non-corrosive low loss contact, and ensure reliable, long-term performance.

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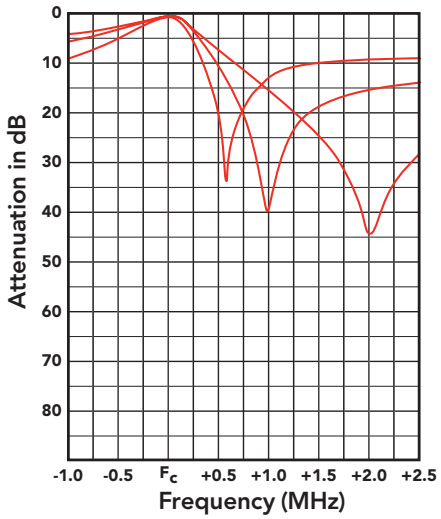
TWDS-5024 Rev. 12/06

148 - 174 MHz

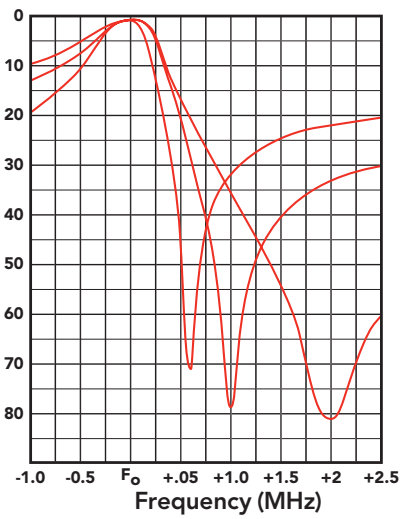
TPRC-1505-1,2

TYPICAL SELECTIVITY CHARACTERISTICS

TPRC-1505-1



TPRC-1505-2



MODEL	TPRC-1505-1	TPRC-1505-2
Insertion loss (adjustable)	0.5 to 2.0 dB	1.0 to 4.0 dB
Attenuation	See figure 1	See figure 2
Maximum dimensions with tuners extended in. (cm)	5 x 28 (13 x 71)	5.25 x 19 x 28 (13 x 48 x 71)
Net weight lb. (kg)	5 (2.3)	11 (5)
Shipping weight lb. (kg)	8 (3.6)	14 (6.5)

COMMON SPECIFICATIONS	
Tuning frequency range	148-174 MHz
Nominal impedance	50 ohms
VSWR at resonance (max)	1.5:1
Input power (max) vs. insertion loss	0.5 dB - 350 watts, 1 dB - 250 watts, 2 dB - 150 watts
Temperature range	-30°C to +70°C
Cavity electrical length	1/4 wavelength
Outer conductor, end plates	6061-T6 aluminum
Inner conductor, coupling loops	Silver plated copper
Tuning rod	Invar
Contactors, fingerstock	Beryllium copper
Cavity dimensions (Diam. x H) in. (cm)	5 x 23.5 (13 x 60)
Connectors	N or UHF female (opt.)
Finish	Gray acrylic enamel

NOTE: When ordering be sure to specify exact frequency and model number. Contact the factory if additional information or assistance is required.

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148 - 174 MHz

TWNC-1505-1,2
NOTCH CAVITIES

TWNC-1505-1

TWNC-1505-2

The Telewave TWNC-1505-1 and 1505-2 are 5" diameter, ¼-wavelength notch cavities with an adjustable coupling loop. Notch cavities are typically used together with Pass or Pass/Reject cavities to eliminate a particular frequency. Notch cavities have very low loss outside the notch band. Telewave can also "tilt" the notch response to move a notch very close to a pass frequency without adversely affecting the pass response.

TWNC-1505 cavities cover 148-174 MHz. All cavities are tuned to specified frequencies prior to shipping, and no further adjustments should be required. The positive locking mechanism allows for quick field re-tuning if frequency changes become necessary.

These cavities feature calibrated adjustable coupling, and insertion loss can be easily set from 0.5 dB to 2 dB or more to improve selectivity. This allows cavity response to be optimized for any operating environment. At densely populated sites, the TWNC-1505-2 dual cavity filter provides greater selectivity with minimum insertion loss. Multiple cavities can also provide a wider notch when required. Mounting rails are provided for all multiple-cavity filters.

Excellent frequency stability is achieved by the use of a specially machined compensator and Invar rod. The pass and reject frequencies are temperature stable from -30°C to +70°C. Telewave Ground Loop technology places the center conductor of each coupling loop at DC ground potential for lightning protection and noise reduction.

Heavy duty materials are used throughout each cavity to insure high performance and long life. Cavity top plates are machined from 1/4-inch aluminum, and are heliarc welded to the cavity body at the high current point for improved conductivity and strength. This allows Telewave cavities to handle up to 350 watts, depending on insertion loss.

Rigid foam inserts support the tuner assembly allowing vertical or horizontal mounting. Similar metals and alodined aluminum help prevent galvanic corrosion. Silver plated tuners and beryllium copper finger stock provide non-corrosive low loss contact, and ensure reliable, long-term performance.

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148 - 174 MHz

TWNC-1505-1,2

TYPICAL SELECTIVITY CHARACTERISTICS

Figure 1 TWNC-1505-1

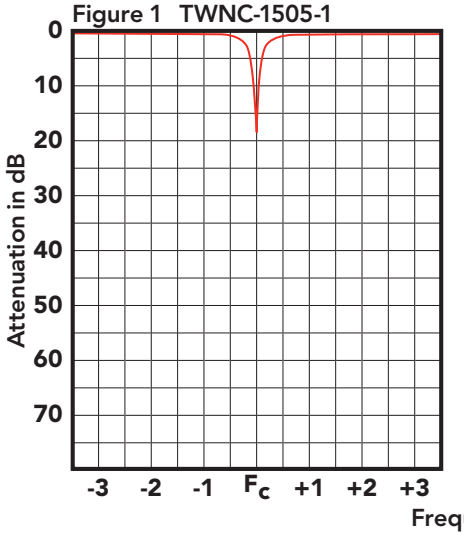
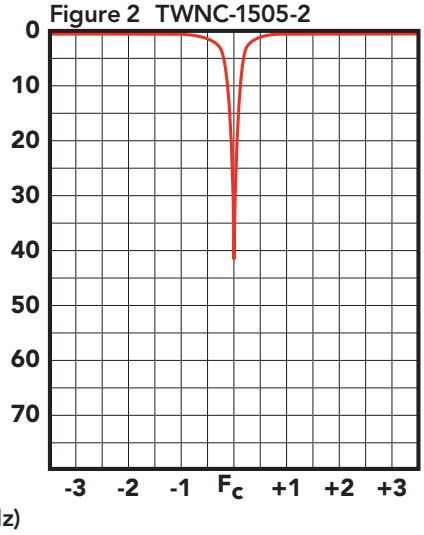


Figure 2 TWNC-1505-2



MODEL	TWNC-1505-1	TWNC-1505-2
Insertion loss (adjustable)	0.15 to 2.0 dB	0.5 to 4.0 dB
Attenuation	See figure 1	See figure 2
Maximum dimensions with tuners extended in. (cm)	5 x 28 (13 x 71)	5.25 x 19 x 28 (13 x 48 x 71)
Net weight lb. (kg)	5 (2.3)	11 (5)
Shipping weight lb. (kg)	8 (3.6)	14 (6.5)

COMMON SPECIFICATIONS	
Tuning frequency range	148-174 MHz
Nominal impedance	50 ohms
VSWR at resonance (max)	1.5:1
Input power (max) vs. insertion loss	0.5 dB - 350 watts, 1 dB - 250 watts, 2 dB - 150 watts
Temperature range	-30°C to +70°C
Cavity electrical length	¼ wavelength
Outer conductor, end plates	6061-T6 aluminum
Inner conductor, coupling loops	Silver plated copper
Tuning rod	Invar
Contactors, fingerstock	Beryllium copper
Cavity dimensions (Diam. x H) in. (cm)	5 x 23.5 (13 x 60)
Connectors	N or UHF female (opt.)
Finish	Gray acrylic enamel

NOTE: When ordering be sure to specify exact frequency and model number. Contact the factory if additional information or assistance is required.

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TWDS-5023 Rev. 12/06

200 - 300 MHz

TWPC-2205-1,2,3
BANDPASS CAVITY

TWPC-2205-1

TWPC-2205-2

TWPC-2205-3

The Telewave TWPC-2205-1, 2205-2, and 2205-3 are 5" diameter, ¼-wavelength, high "Q" bandpass cavity filters with superior selectivity. Bandpass cavities reject all frequencies outside a narrow pass band. These cavities reduce transmitter sideband noise, and also protect receivers against desensitization.

TWPC-2205 cavities cover 200-300 MHz. All cavities are tuned to specified frequencies prior to shipping, and no further adjustments should be required. The positive locking mechanism allows for quick field retuning if frequency changes become necessary.

These cavities also feature calibrated adjustable coupling, and insertion loss can be easily set from 0.5 dB to 2 dB or more to improve selectivity. This allows cavity response to be optimized for any operating environment. At densely populated sites, the 2205-2 and 2205-3 cavity filters provide greater selectivity with minimum insertion loss. Multiple cavities can also provide a wider passband when required. Mounting rails are provided for all multiple-cavity filters.

Excellent frequency stability is achieved by the use of a specially machined compensator and Invar rod. The pass frequency is temperature stable from -30°C to +70°C. Telewave Ground Loop technology places the center conductor of each coupling loop at DC ground potential for lightning protection and noise reduction.

Heavy duty materials are used throughout each cavity to insure high performance and long life. Cavity top plates are machined from 1/4-inch aluminum, and are heliarc welded to the cavity body at the high current point for improved conductivity and strength. This allows Telewave cavities to handle up to 350 watts, depending on insertion loss.

Rigid foam inserts support the tuner assembly allowing vertical or horizontal mounting. Similar metals and alodined aluminum help prevent galvanic corrosion. Silver plated tuners and beryllium copper finger stock provide non-corrosive low loss contact, and ensure reliable, long-term performance.

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TWDS-5014 Rev. 12/06

TWPC-2205-1,2,3

200 - 300 MHz

TYPICAL SELECTIVITY CHARACTERISTICS

Figure 1

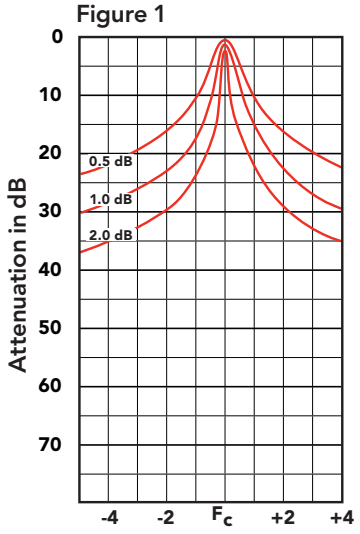


Figure 2

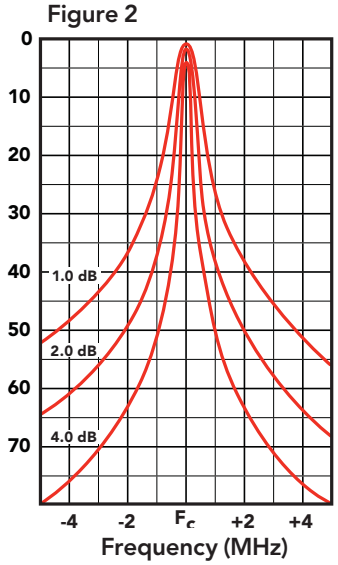
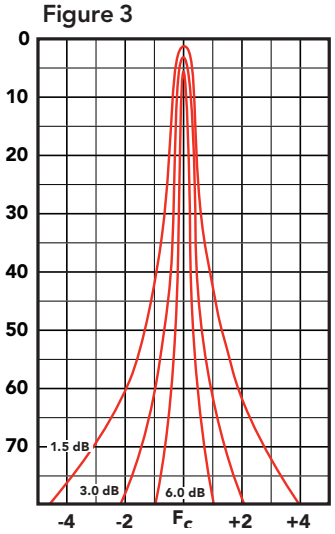


Figure 3



MODEL	TWPC-2205-1	TWPC-2205-2	TWPC-2205-3
Insertion loss (adjustable)	0.5 to 2.0 dB	1.0 to 4.0 dB	1.5 to 6.0 dB
Attenuation	See figure 1	See figure 2	See figure 3
Maximum dimensions with tuners extended in. (cm)	5 x 24 (13 x 61)	5.25 x 19 x 24 (13 x 48 x 61)	5.25 x 19 x 24 (13 x 48 x 61)
Net weight lb. (kg)	3 (1.5)	11.5 (5.3)	15 (6.8)
Shipping weight lb. (kg)	7 (3.2)	15 (6.8)	19 (8.6)

COMMON SPECIFICATIONS	
Tuning frequency range	200-300 MHz
Nominal impedance	50 ohms
VSWR at resonance (max)	1.5:1
Input power (max) vs. insertion loss	0.5 dB - 350 watts, 1 dB - 250 watts, 2 dB - 150 watts
Temperature range	-30°C to +70°C
Cavity electrical length	¼ wavelength
Outer conductor, end plates	6061-T6 aluminum
Inner conductor, coupling loops	Silver plated copper
Tuning rod	Invar
Contactors, fingerstock	Beryllium copper
Cavity dimensions (Diam. x H) in. (cm)	5 x 18 (13 x 46)
Connectors	N or UHF female (opt.)
Finish	Gray acrylic enamel

NOTE: When ordering be sure to specify exact frequency and model number. Contact the factory if additional information or assistance is required.

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TWDS-5014 Rev. 12/06

200 - 300 MHz

TWPC-2208-1, 2
BANDPASS CAVITIES

TWPC-2208-1

TWPC-2208-2

The Telewave TWPC-2208-1 and 2208-2 are 8" diameter, ¼-wavelength, high "Q" bandpass cavity filters with superior selectivity. Bandpass cavities reject all frequencies outside a narrow pass band. These cavities reduce transmitter sideband noise, and also protect receivers against desensitization.

TWPC-2208 cavities cover 200-300 MHz. All cavities are tuned to specified frequencies prior to shipping, and no further adjustments should be required. The positive locking mechanism allows for quick field retuning if frequency changes become necessary.

These cavities also feature calibrated adjustable coupling, and insertion loss can be easily set from 0.5 dB to 2 dB or more to improve selectivity. This allows cavity response to be optimized for any operating environment. At densely populated sites, the 2208-2 cavity filters provide greater selectivity with minimum insertion loss. Multiple cavities can also provide a wider passband when required. Mounting rails are provided for all multiple-cavity filters.

Excellent frequency stability is achieved by the use of a specially machined compensator and Invar rod. The pass frequency is temperature stable from -30°C to +70°C. Telewave Ground Loop technology places the center conductor of each coupling loop at DC ground potential for lightning protection and noise reduction.

Heavy duty materials are used throughout each cavity to insure high performance and long life. Cavity top plates are machined from 1/4-inch aluminum, and are heliarc welded to the cavity body at the high current point for improved conductivity and strength. This allows Telewave cavities to handle up to 350 watts, depending on insertion loss.

Rigid foam inserts support the tuner assembly allowing vertical or horizontal mounting. Similar metals and alodined aluminum help prevent galvanic corrosion. Silver plated tuners and beryllium copper finger stock provide non-corrosive low loss contact, and ensure reliable, long-term performance.

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TWPC-2208-1, 2

200 - 300 MHz

TYPICAL SELECTIVITY CHARACTERISTICS

Figure 1

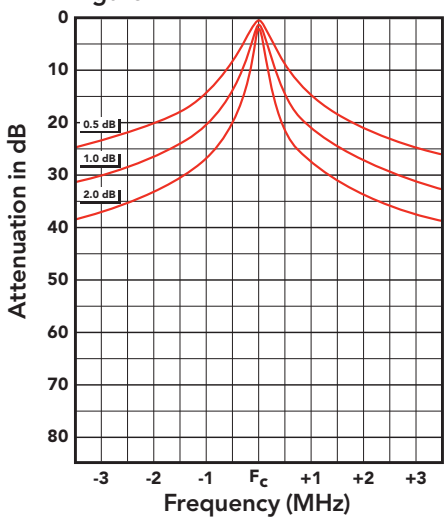
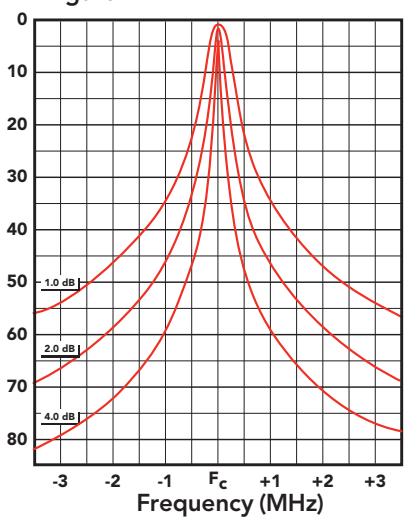


Figure 2



MODEL	TWPC-2208-1	TWPC-2208-2
Insertion loss (adjustable)	0.15 to 2.0 dB	0.5 to 4.0 dB
Attenuation	See figure 1	See figure 2
Maximum dimensions with tuners extended in. (cm)	8 x 22 (25 x 56)	8 x 19 x 22 (25 x 48 x 56)
Net weight lb. (kg)	7 (3.2)	15 (6.8)
Shipping weight lb. (kg)	9 (4.1)	19 (8.6)

COMMON SPECIFICATIONS	
Tuning frequency range	200-300 MHz
Nominal impedance	50 ohms
VSWR at resonance (max)	1.5:1
Input power (max) vs. insertion loss	0.5 dB - 350 watts, 1 dB - 250 watts, 2 dB - 150 watts
Temperature range	-30°C to +70°C
Cavity electrical length	¼ wavelength
Outer conductor, end plates	6061-T6 aluminum
Inner conductor, coupling loops	Silver plated copper
Tuning rod	Invar
Contactors, fingerstock	Beryllium copper
Cavity dimensions (Diam. x H) in. (cm)	8 x 18 (20 x 46)
Connectors	N or UHF female (opt.)
Finish	Gray acrylic enamel

NOTE: When ordering be sure to specify exact frequency and model number. Contact the factory if additional information or assistance is required.

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TWDS-5015 Rev. 12/06

200 - 300 MHz

TWPC-2210-1,2
BANDPASS CAVITY

TWPC-2210-1

TWPC-2210-2

The Telewave TWPC-2210-1 and 2210-2 are 10" diameter, ¼-wavelength, high "Q" bandpass cavity filters with superior selectivity. Bandpass cavities reject all frequencies outside a narrow pass band. These cavities reduce transmitter sideband noise, and also protect receivers against desensitization.

TWPC-2210 cavities cover 200-300 MHz. All cavities are tuned to specified frequencies prior to shipping, and no further adjustments should be required. The positive locking mechanism allows for quick field retuning if frequency changes become necessary.

These cavities also feature calibrated adjustable coupling, and insertion loss can be easily set from 0.5 dB to 2 dB or more to improve selectivity. This allows cavity response to be optimized for any operating environment. At densely populated sites, the 2210-2 cavity filter provides greater selectivity with minimum insertion loss. Multiple cavities can also provide a wider passband when required. Mounting rails are provided for all multiple-cavity filters.

Excellent frequency stability is achieved by the use of a specially machined compensator and Invar rod. The pass frequency is temperature stable from -30°C to +70°C. Telewave Ground Loop technology places the center conductor of each coupling loop at DC ground potential for lightning protection and noise reduction.

Heavy duty materials are used throughout each cavity to insure high performance and long life. Cavity top plates are machined from 1/4-inch aluminum, and are heliarc welded to the cavity body at the high current point for improved conductivity and strength. This allows Telewave cavities to handle up to 350 watts, depending on insertion loss.

Rigid foam inserts support the tuner assembly allowing vertical or horizontal mounting. Similar metals and alodined aluminum help prevent galvanic corrosion. Silver plated tuners and beryllium copper finger stock provide non-corrosive low loss contact, and ensure reliable, long-term performance.

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TWDS-5016 Rev. 12/06

TWPC-2210-1,2

200 - 300 MHz

TYPICAL SELECTIVITY CHARACTERISTICS

Figure 1

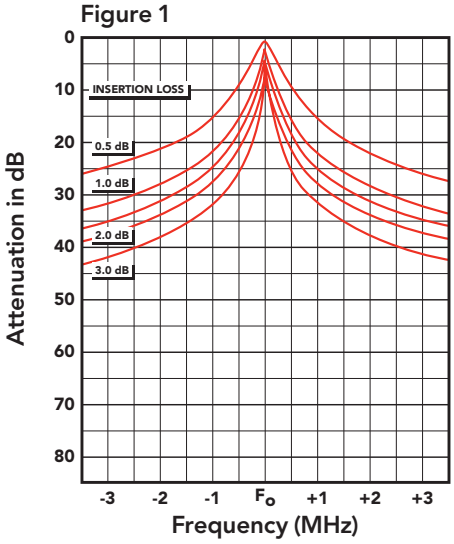
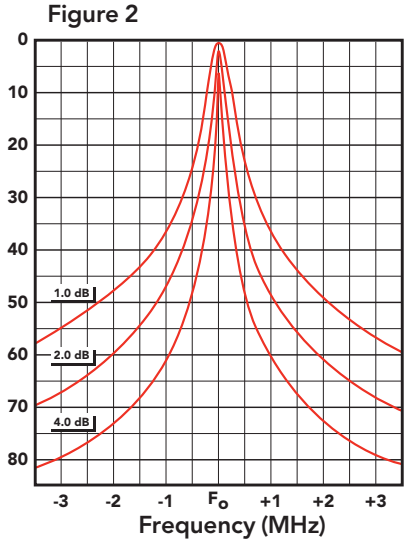


Figure 2



MODEL	TWPC-2210-1	TWPC-2210-2
Insertion loss (adjustable)	0.5 to 2.0 dB	1.0 to 4.0 dB
Attenuation	See figure 1	See figure 2
Maximum dimensions with tuners extended in. (cm)	10 x 22 (25.4 x 56)	20 x 19 x 22 (50.8 x 48 x 56)
Net weight lb. (kg)	7.5 (3.4)	17 (7.7)
Shipping weight lb. (kg)	12 (5.5)	22 (10)

COMMON SPECIFICATIONS	
Tuning frequency range	200-300 MHz
Nominal impedance	50 ohms
VSWR at resonance (max)	1.5:1
Input power (max) vs. insertion loss	0.5 dB - 350 watts, 1 dB - 250 watts, 2 dB - 150 watts
Temperature range	-30°C to +70°C
Cavity electrical length	¼ wavelength
Outer conductor, end plates	6061-T6 aluminum
Inner conductor, coupling loops	Silver plated copper
Tuning rod	Invar
Contactors, fingerstock	Beryllium copper
Cavity dimensions (Diam. x H) in. (cm)	10 x 18 (25 x 46)
Connectors	N or UHF female (opt.)
Finish	Gray acrylic enamel

NOTE: When ordering be sure to specify exact frequency and model number. Contact the factory if additional information or assistance is required.

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TWDS-5016 Rev. 12/06

300 - 400 MHz

TWPC-3505-1,2,3
BANDPASS CAVITY

TWPC-3505-1

TWPC-3505-2

TWPC-3505-3

The Telewave TWPC-3505-1, 3505-2, and 3505-3 are 5" diameter, ¼-wavelength, high "Q" bandpass cavity filters with superior selectivity. Bandpass cavities reject all frequencies outside a narrow pass band. These cavities reduce transmitter sideband noise, and also protect receivers against desensitization.

TWPC-3505 cavities cover 300-400 MHz. All cavities are tuned to specified frequencies prior to shipping, and no further adjustments should be required. The positive locking mechanism allows for quick field retuning if frequency changes become necessary.

These cavities also feature calibrated adjustable coupling, and insertion loss can be easily set from 0.5 dB to 2 dB or more to improve selectivity. This allows cavity response to be optimized for any operating environment. At densely populated sites, the 3505-2 and 3505-3 cavity filters provide greater selectivity with minimum insertion loss. Multiple cavities can also provide a wider passband when required. Mounting rails are provided for all multiple-cavity filters.

Excellent frequency stability is achieved by the use of a specially machined compensator and Invar rod. The pass frequency is temperature stable from -30°C to +70°C. Telewave Ground Loop technology places the center conductor of each coupling loop at DC ground potential for lightning protection and noise reduction.

Heavy duty materials are used throughout each cavity to insure high performance and long life. Cavity top plates are machined from 1/4-inch aluminum, and are heliarc welded to the cavity body at the high current point for improved conductivity and strength. This allows Telewave cavities to handle up to 350 watts, depending on insertion loss.

Similar metals and alodined aluminum help prevent galvanic corrosion. Silver plated tuners and beryllium copper finger stock provide non-corrosive low loss contact, and ensure reliable, long-term performance.

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TWDS-5022 Rev. 12/06

300 - 400 MHz

TWPC-3505-1,2,3

TYPICAL SELECTIVITY CHARACTERISTICS

Figure 1

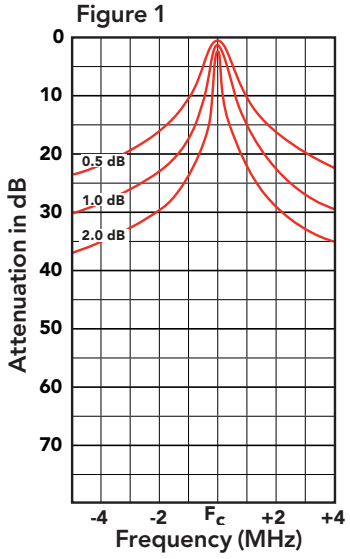


Figure 2

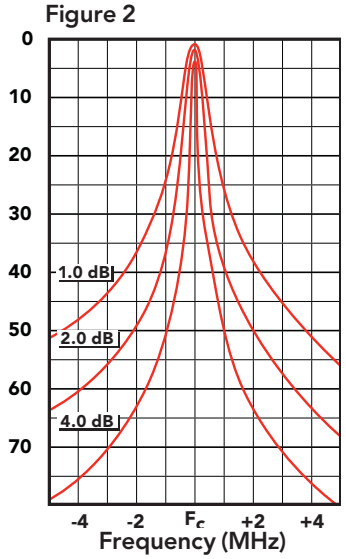
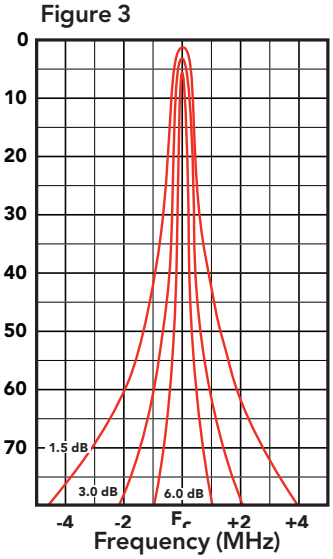


Figure 3



MODEL	TWPC-3505-1	TWPC-3505-2	TWPC-3505-3
Insertion loss (adjustable)	0.5 to 2.0 dB	1.0 to 4.0 dB	1.5 to 6.0 dB
Attenuation	See figure 1	See figure 2	See figure 3
Maximum dimensions with tuners extended in. (cm)	5 x 24 (13 x 61)	5.25 x 19 x 24 (13 x 48 x 61)	5.25 x 19 x 24 (13 x 48 x 61)
Net weight lb. (kg)	3 (1.5)	11.5 (5.3)	15 (6.8)
Shipping weight lb. (kg)	7 (3.2)	15 (6.8)	19 (8.6)

COMMON SPECIFICATIONS	
Tuning frequency range	200-300 MHz
Nominal impedance	50 ohms
VSWR at resonance (max)	1.5:1
Input power (max) vs. insertion loss	0.5 dB - 350 watts, 1 dB - 250 watts, 2 dB - 150 watts
Temperature range	-30°C to +70°C
Cavity electrical length	¼ wavelength
Outer conductor, end plates	6061-T6 aluminum
Inner conductor, coupling loops	Silver plated copper
Tuning rod	Invar
Contactors, fingerstock	Beryllium copper
Cavity dimensions (Diam. x H) in. (cm)	5 x 18 (13 x 46)
Connectors	N or UHF female (opt.)
Finish	Gray acrylic enamel

NOTE: When ordering be sure to specify exact frequency and model number. Contact the factory if additional information or assistance is required.

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TWDS-5022 Rev. 12/06

350 - 435 MHz

TWPC-3910-1
BANDPASS CAVITY

TWPC-3910-1

The Telewave TWPC-3910-1 is a 10" diameter, ¼-wavelength, high "Q" bandpass cavity filter with superior selectivity. Bandpass cavities reject all frequencies outside a narrow pass band. These cavities reduce transmitter sideband noise, and also protect receivers against desensitization.

TWPC-3910 cavities cover 200-300 MHz. All cavities are tuned to specified frequencies prior to shipping, and no further adjustments should be required. The positive locking mechanism allows for quick field retuning if frequency changes become necessary.

These cavities also feature calibrated adjustable coupling, and insertion loss can be easily set from 0.5 dB to 2 dB or more to improve selectivity. This allows cavity response to be optimized for any operating environment.

Excellent frequency stability is achieved by the use of a specially machined compensator and Invar rod. The pass frequency is temperature stable from -30°C to +70°C. Telewave Ground Loop technology places the center conductor of each coupling loop at DC ground potential for lightning protection and noise reduction.

Heavy duty materials are used throughout each cavity to insure high performance and long life. Cavity top plates are machined from 1/4-inch aluminum, and are heliarc welded to the cavity body at the high current point for improved conductivity and strength. This allows Telewave cavities to handle up to 350 watts, depending on insertion loss.

Similar metals and alodined aluminum help prevent galvanic corrosion. Silver plated tuners and beryllium copper finger stock provide non-corrosive low loss contact, and ensure reliable, long-term performance.

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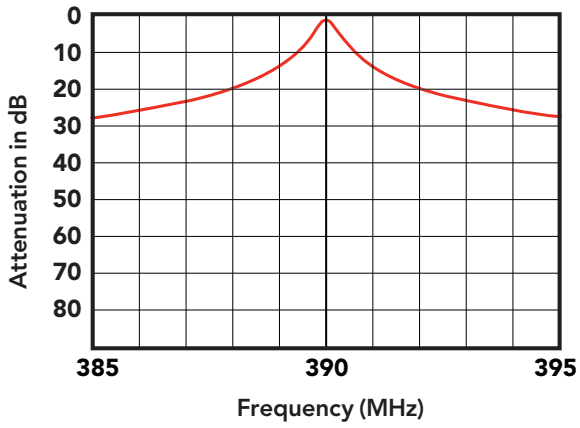
TWDS-5027 Rev. 12/06

TWPC-3910-1

350 - 435 MHz

TYPICAL RESPONSE CURVE



SPECIFICATIONS	
Tuning frequency range	350-435 MHz
Insertion loss (adjustable)	0.5 to 3.0 dB
Attenuation at 1dB insertion loss	See graph
Nominal impedance	50 ohms
VSWR at resonance (max)	1.5:1
Input power (max) vs. insertion loss	0.5 dB - 350 watts, 1 dB - 250 watts, 2 dB - 150 watts
Temperature range	-30°C to +70°C
Cavity electrical length	¼ wavelength
Outer conductor, end plates	6061-T6 aluminum
Inner conductor, coupling loops	Silver plated copper
Tuning rod	Invar
Contactors, fingerstock	Beryllium copper
Cavity dimensions (Diam. x H) in. (cm)	4 x 13.25 (10.2 x 33.7)
Maximum dimensions with tuners extended in. (cm)	4 x 20.25 (10.2 x 51.4)
Connectors	N or UHF female (opt.)
Finish	Gray acrylic enamel
Net weight lb. (kg)	9 (4.1)
Shipping weight lb. (kg)	9 (5.5)

NOTE: When ordering be sure to specify exact frequency and model number. Contact the factory if additional information or assistance is required.

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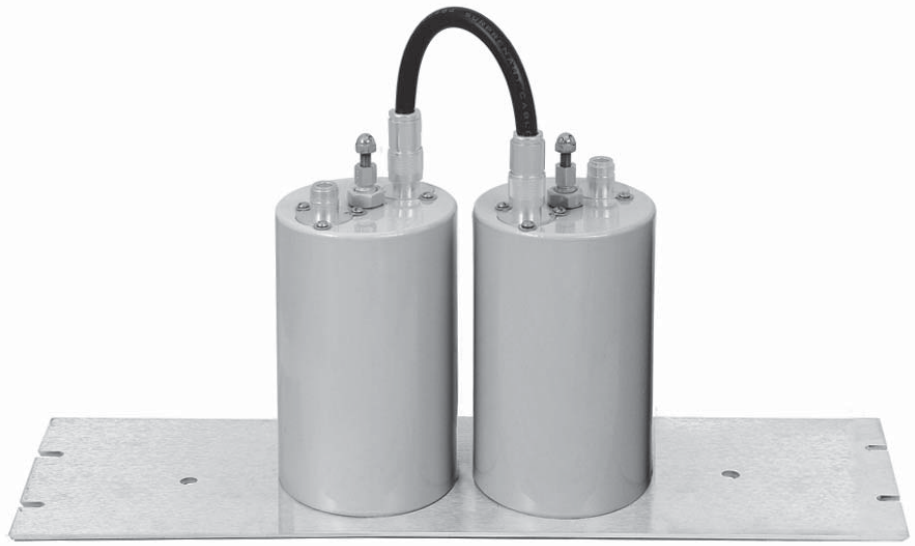
TWDS-5027 Rev. 12/06

400 - 512 MHz

TWPC-4504-1, 2
BANDPASS CAVITIES

TWPC-4504-1



TWPC-4504-2

The Telewave TWPC-4504-1 and 4504-2 are 4" diameter, ¼-wavelength, high "Q" bandpass cavity filters with superior selectivity. Bandpass cavities reject all frequencies outside a narrow pass band. These cavities reduce transmitter sideband noise, and also protect receivers against desensitization.

TWPC-4504 cavities cover 400-512 MHz. All cavities are tuned to specified frequencies prior to shipping, and no further adjustments should be required. The positive locking mechanism allows for quick field retuning if frequency changes become necessary.

These cavities also feature calibrated adjustable coupling, and insertion loss can be easily set from 0.5 dB to 2 dB or more to improve selectivity. This allows cavity response to be optimized for any operating environment. At densely populated sites, the 4504-2 cavity filter provides greater selectivity with minimum insertion loss. Multiple cavities can also provide a wider passband when required. Up to four 4" cavities can be mounted on one 19" x 5.25" panel.

Excellent frequency stability is achieved by the use of a specially machined compensator and Invar rod. The pass frequency is temperature stable from -30°C to +70°C. Telewave Ground Loop technology places the center conductor of each coupling loop at DC ground potential for lightning protection and noise reduction.

Heavy duty materials are used throughout each cavity to insure high performance and long life. Cavity top plates are machined from 1/4-inch aluminum, and are heliarc welded to the cavity body at the high current point for improved conductivity and strength. This allows Telewave cavities to handle up to 350 watts, depending on insertion loss.

Similar metals and alodined aluminum help prevent galvanic corrosion. Silver plated tuners and beryllium copper finger stock provide non-corrosive low loss contact, and ensure reliable, long-term performance.

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TWDS-5001 Rev. 12/06

406 - 512 MHz

TWPC-4504-1, 2

TYPICAL SELECTIVITY CHARACTERISTICS

Figure 1

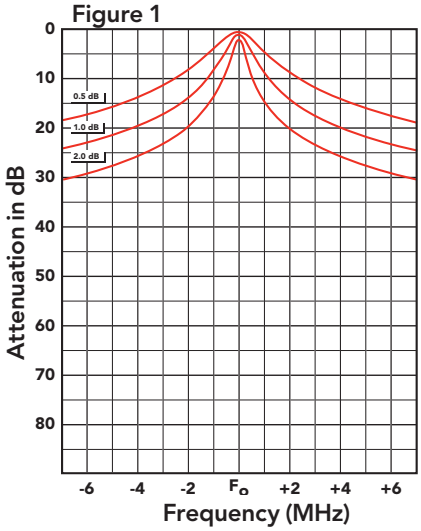
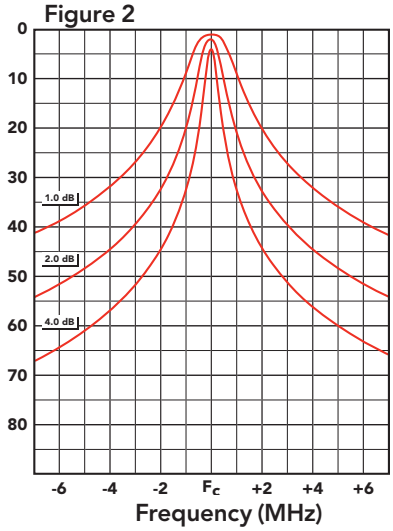


Figure 2



MODEL	TWPC-4504-1	TWPC-4504-2
Insertion loss (adjustable)	0.5 to 2.0 dB	1.0 to 4.0 dB
Attenuation	See figure 1	See figure 2
Maximum dimensions with tuners extended in. (cm)	4 x 8 (10 x 20)	5.25 x 19 x 11 (13 x 48 x 28)
Net weight lb. (kg)	3.3 (1.5)	11.5 (5.25)
Shipping weight lb. (kg)	7 (3.2)	15 (6.8)

COMMON SPECIFICATIONS	
Tuning frequency range	400-512 MHz
Nominal impedance	50 ohms
VSWR at resonance (max)	1.5:1
Input power (max) vs. insertion loss	0.5 dB - 350 watts, 1 dB - 250 watts, 2 dB - 150 watts
Temperature range	-30°C to +70°C
Cavity electrical length	¼ wavelength
Outer conductor, end plates	6061-T6 aluminum
Inner conductor, coupling loops	Silver plated copper
Tuning rod	Invar
Contactors, fingerstock	Beryllium copper
Cavity dimensions (Diam. x H) in. (cm)	4 x 8 (10 x 20)
Connectors	N or UHF female (opt.)
Finish	Gray acrylic enamel

NOTE: When ordering be sure to specify exact frequency and model number. Contact the factory if additional information or assistance is required.

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TWDS-5001 Rev. 12/06

400 - 512 MHz

TWPC-4505-1, 2, 3

BANDPASS CAVITIES - 3/4 WAVE

TWPC-4505-1

TWPC-4505-2

TWPC-4505-3

The Telewave TWPC- 4505-1, 4505-2, and 4505-3 are 5" diameter, ¾ wavelength, high "Q" bandpass cavity filters with superior selectivity. Bandpass cavities reject all frequencies outside a narrow pass band. These cavities reduce transmitter sideband noise, and also protect receivers against desensitization.

TWPC-4505 cavities cover 400-512 MHz. All cavities are tuned to specified frequencies prior to shipping, and no further adjustments should be required. The positive locking mechanism allows for quick field retuning if frequency changes become necessary.

These cavities also feature calibrated adjustable coupling, and insertion loss can be easily set from 0.5 dB to 2 dB or more to improve selectivity. This allows cavity response to be optimized for any operating environment. At densely populated sites, the 4505-2 and 4505-3 cavity filters provide greater selectivity with minimum insertion loss. Multiple cavities can also provide a wider passband when required. Mounting rails are provided for all multiple-cavity filters.

Excellent frequency stability is achieved by the use of a specially machined compensator and Invar rod. The pass frequency is temperature stable from -30°C to +70°C. Telewave Ground Loop technology places the center conductor of each coupling loop at DC ground potential for lightning protection and noise reduction.

Heavy duty materials are used throughout each cavity to insure high performance and long life. Cavity top plates are machined from 1/4-inch aluminum, and are heliarc welded to the cavity body at the high current point for improved conductivity and strength. This allows Telewave cavities to handle up to 350 watts, depending on insertion loss.

Rigid foam inserts support the tuner assembly allowing vertical or horizontal mounting. Similar metals and alodined aluminum help prevent galvanic corrosion. Silver plated tuners and beryllium copper finger stock provide non-corrosive low loss contact, and ensure reliable, long-term performance.

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400 - 512 MHz

TWPC-4505-1, 2, 3

TYPICAL SELECTIVITY CHARACTERISTICS

Figure 1

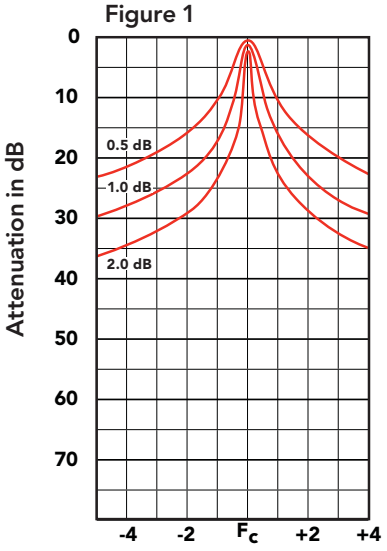


Figure 2

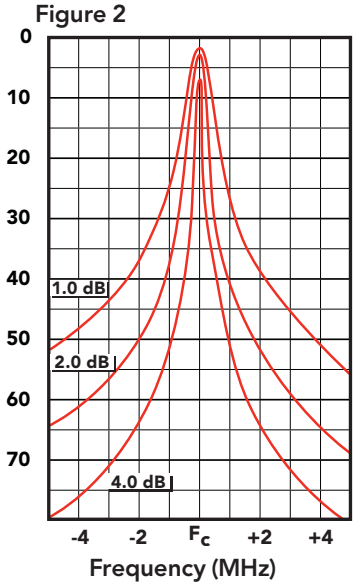
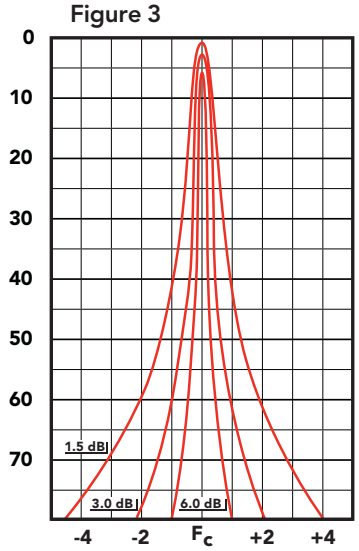


Figure 3



MODEL	TWPC-4505-1	TWPC-4505-2	TWPC-4505-3
Insertion loss (adjustable)	0.5 to 2.0 dB	1.0 to 4.0 dB	1.5 to 6.0 dB
Attenuation	See figure 1	See figure 2	See figure 3
Maximum dimensions with tuners extended in. (cm)	5 x 28 (13 x 71)	5.25 x 19 x 28 (13 x 48 x 71)	5.25 x 19 x 28 (13 x 48 x 71)
Net weight lb. (kg)	5 (2.3)	11.5 (5.3)	15 (6.8)
Shipping weight lb. (kg)	8 (3.6)	14 (6.5)	18 (8.1)

COMMON SPECIFICATIONS	
Tuning frequency range	400-512 MHz
Nominal impedance	50 ohms
VSWR at resonance (max)	1.5:1
Input power (max) vs. insertion loss	0.5 dB - 350 watts, 1 dB - 250 watts, 2 dB - 150 watts
Temperature range	-30°C to +70°C
Cavity electrical length	¾ wavelength
Outer conductor, end plates	6061-T6 aluminum
Inner conductor, coupling loops	Silver plated copper
Tuning rod	Invar
Contactors, fingerstock	Beryllium copper
Cavity dimensions (Diam. x H) in. (cm)	5 x 23.5 (13 x 60)
Connectors	N or UHF female (opt.)
Finish	Gray acrylic enamel

NOTE: When ordering be sure to specify exact frequency and model number. Contact the factory if additional information or assistance is required.

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TWDS-5018 Rev. 12/06

400 - 512 MHz

TWPC-4510-1,2
BANDPASS CAVITY

TWPC-4510-1

TWPC-4510-2

The Telewave TWPC-4510-1 and 4510-2 are 10" diameter, ¼-wavelength, high "Q" bandpass cavity filters with superior selectivity. Bandpass cavities reject all frequencies outside a narrow pass band. These cavities reduce transmitter sideband noise, and also protect receivers against desensitization.

TWPC-4510 cavities cover 400-512 MHz. All cavities are tuned to specified frequencies prior to shipping, and no further adjustments should be required. The positive locking mechanism allows for quick field retuning if frequency changes become necessary.

These cavities also feature calibrated adjustable coupling, and insertion loss can be easily set from 0.5 dB to 2 dB or more to improve selectivity. This allows cavity response to be optimized for any operating environment. At densely populated sites, the 4510-2 cavity filter provides greater selectivity with minimum insertion loss. Multiple cavities can also provide a wider passband when required. Mounting rails are provided for all multiple-cavity filters.

Excellent frequency stability is achieved by the use of a specially machined compensator and Invar rod. The pass frequency is temperature stable from -30°C to +70°C. Telewave Ground Loop technology places the center conductor of each coupling loop at DC ground potential for lightning protection and noise reduction.

Heavy duty materials are used throughout each cavity to insure high performance and long life. Cavity top plates are machined from 1/4-inch aluminum, and are heliarc welded to the cavity body at the high current point for improved conductivity and strength. This allows Telewave cavities to handle up to 350 watts, depending on insertion loss.

Similar metals and alodined aluminum help prevent galvanic corrosion. Silver plated tuners and beryllium copper finger stock provide non-corrosive low loss contact, and ensure reliable, long-term performance.

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TWDS-5017 Rev. 12/06

406 - 512 MHz

TWPC-4510-1,2

TYPICAL BANDPASS CAVITY RESPONSE CURVES

Figure 1

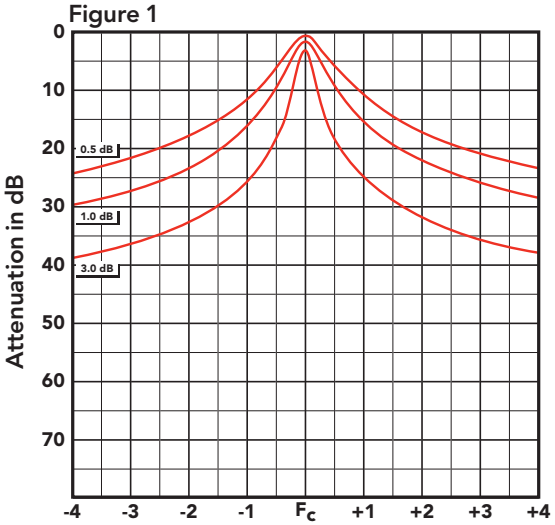
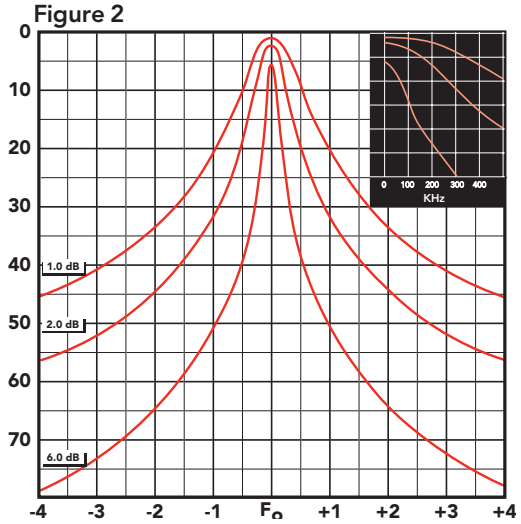


Figure 2



Frequency (MHz)

MODEL	TWPC-4510-1	TWPC-4510-2
Insertion loss (adjustable)	0.5 to 2.0 dB	1.0 to 4.0 dB
Attenuation	See figure 1	See figure 2
Maximum dimensions with tuners extended in. (cm)	10 x 17 (25.4 x 43)	10.25 x 19 x 17 (26 x 48 x 43)
Net weight lb. (kg)	7.5 (3.4)	17 (7.7)
Shipping weight lb. (kg)	10 (4.5)	22 (10)

COMMON SPECIFICATIONS	
Tuning frequency range	406-512 MHz
Nominal impedance	50 ohms
VSWR at resonance (max)	1.5:1
Input power (max) vs. insertion loss	0.5 dB - 350 watts, 1 dB - 250 watts, 2 dB - 150 watts
Temperature range	-30°C to +70°C
Cavity electrical length	¼ wavelength
Outer conductor, end plates	6061-T6 aluminum
Inner conductor, coupling loops	Silver plated copper
Tuning rod	Invar
Contactors, fingerstock	Beryllium copper
Cavity dimensions (Diam. x H) in. (cm)	10 x 12 (25.4 x 31)
Connectors	N or UHF female (opt.)
Finish	Gray acrylic enamel

NOTE: When ordering be sure to specify exact frequency and model number. Contact the factory if additional information or assistance is required.

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776 - 825 MHz

TWPC-7908
BANDPASS CAVITY

TWPC-7908-1

TWPC-7908-2

The Telewave TWPC-7908-1 and 7908-2 are 10" diameter, ¼-wavelength, high "Q" bandpass cavity filters with superior selectivity. Bandpass cavities reject all frequencies outside a narrow pass band. These cavities reduce transmitter sideband noise, and also protect receivers against desensitization.

TWPC-7908 cavities cover 776-825 MHz. All cavities are tuned to specified frequencies prior to shipping, and no further adjustments should be required. The positive locking mechanism allows for quick field retuning if frequency changes become necessary.

These cavities also feature calibrated adjustable coupling, and insertion loss can be easily set from 0.5 dB to 2 dB or more to improve selectivity. This allows cavity response to be optimized for any operating environment. At densely populated sites, the 7908-2 cavity filter provides greater selectivity with minimum insertion loss. Multiple cavities can also provide a wider passband when required. Mounting rails are provided for all multiple-cavity filters.

Excellent frequency stability is achieved by the use of a specially machined compensator and Invar rod. The pass frequency is temperature stable from -30°C to +70°C. Telewave Ground Loop technology places the center conductor of each coupling loop at DC ground potential for lightning protection and noise reduction.

Heavy duty materials are used throughout each cavity to insure high performance and long life. Cavity top plates are machined from 1/4-inch aluminum, and are heliarc welded to the cavity body at the high current point for improved conductivity and strength. This allows Telewave cavities to handle up to 350 watts, depending on insertion loss.

Similar metals and alodined aluminum help prevent galvanic corrosion. Silver plated tuners and beryllium copper finger stock provide non-corrosive low loss contact, and ensure reliable, long-term performance.

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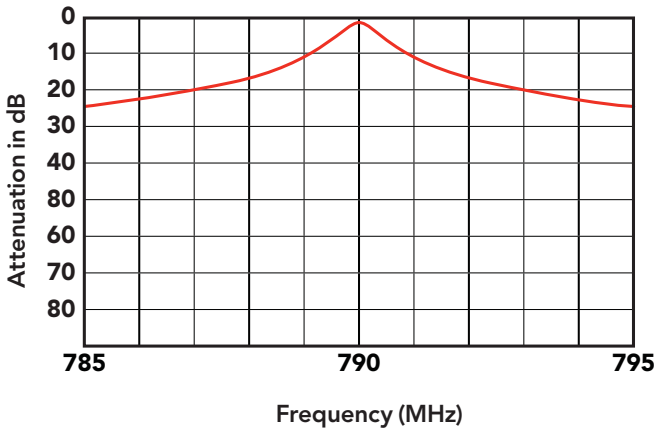
TWDS-5028 Rev. 12/06

TWPC-7908

776 - 825 MHz

TYPICAL RESPONSE CURVE

Figure 1



SPECIFICATIONS	
Tuning frequency range	776-825 MHz
Insertion loss (adjustable)	0.5 to 2.0 dB
Attenuation at 1dB insertion loss	See figure 1
Nominal impedance	50 ohms
VSWR at resonance (max)	1.5:1
Input power (max) vs. insertion loss	0.5 dB - 350 watts, 1 dB - 250 watts, 2 dB - 150 watts
Temperature range	-30°C to +70°C
Cavity electrical length	¼ wavelength
Outer conductor, end plates	6061-T6 aluminum
Inner conductor, coupling loops	Silver plated copper
Tuning rod	Invar
Contactors, fingerstock	Beryllium copper
Cavity dimensions (Diam. x H) in. (cm)	8 x 11.875 (20.3 x 30.2)
Maximum dimensions with tuners extended in. (cm)	8 x 15.375 (20.3 x 39.1)
Connectors	N or UHF female (opt.)
Finish	Gray acrylic enamel
Net weight lb. (kg)	7 (3.2)
Shipping weight lb. (kg)	10 (4.5)

NOTE: When ordering be sure to specify exact frequency and model number. Contact the factory if additional information or assistance is required.

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TWDS-5028 Rev. 12/06

800 - 970 MHz

TWPC-8608-1,-2
BANDPASS CAVITIES

TWPC-8608-1

TWPC-8608-2

The Telewave TWPC-8608-1 and 8608-2 are 10" diameter, ¼-wavelength, high "Q" bandpass cavity filters with superior selectivity. Bandpass cavities reject all frequencies outside a narrow pass band. These cavities reduce transmitter sideband noise, and also protect receivers against desensitization.

TWPC-8608 cavities cover 800-970 MHz. All cavities are tuned to specified frequencies prior to shipping, and no further adjustments should be required. The positive locking mechanism allows for quick field retuning if frequency changes become necessary.

These cavities also feature calibrated adjustable coupling, and insertion loss can be easily set from 0.5 dB to 2 dB or more to improve selectivity. This allows cavity response to be optimized for any operating environment. At densely populated sites, the 8608-2 cavity filter provides greater selectivity with minimum insertion loss. Multiple cavities can also provide a wider passband when required. Mounting rails are provided for all multiple-cavity filters.

Excellent frequency stability is achieved by the use of a specially machined compensator and Invar rod. The pass frequency is temperature stable from -30°C to +70°C. Telewave Ground Loop technology places the center conductor of each coupling loop at DC ground potential for lightning protection and noise reduction.

Heavy duty materials are used throughout each cavity to insure high performance and long life. Cavity top plates are machined from 1/4-inch aluminum, and are heliarc welded to the cavity body at the high current point for improved conductivity and strength. This allows Telewave cavities to handle up to 350 watts, depending on insertion loss.

Similar metals and alodined aluminum help prevent galvanic corrosion. Silver plated tuners and beryllium copper finger stock provide non-corrosive low loss contact, and ensure reliable, long-term performance.

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TWDS-5002 Rev. 12/06

800 - 970 MHz

TWPC-8608-1,-2

TYPICAL SELECTIVITY CHARACTERISTICS

Figure 1 - TWPC-8608-1 at 860 MHz

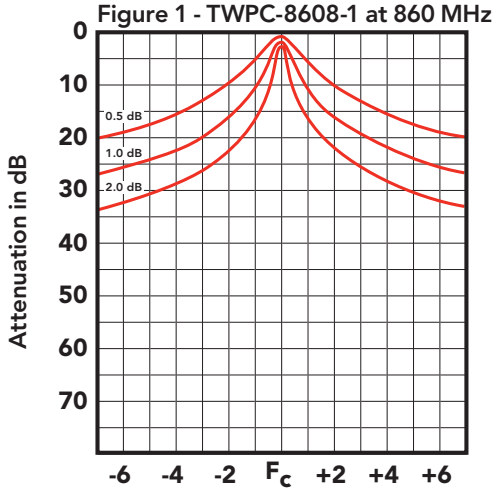
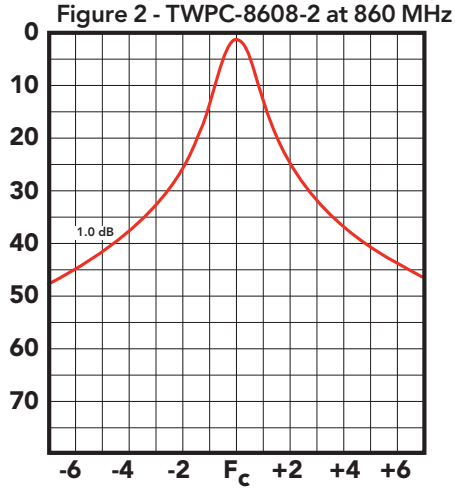


Figure 2 - TWPC-8608-2 at 860 MHz



Frequency (MHz)

MODEL	TWPC-8608-1	TWPC-8608-2
Insertion loss (adjustable)	0.5 to 2.0 dB	1.0 to 4.0 dB
Attenuation	See figure 1	See figure 2
Max size - tuners extended in. (cm)	8 x 15.375 (20.3 x 39.1)	8.25 x 19 x 15.375 (21 x 48.3 x 39.1)
Net weight lb. (kg)	7 (3.2)	17 (7.7)
Shipping weight lb. (kg)	10 (4.5)	22 (10)

COMMON SPECIFICATIONS	
Tuning frequency range	800-970 MHz
Nominal impedance	50 ohms
VSWR at resonance (max)	1.5:1
Input power (max) vs. insertion loss	0.5 dB - 350 watts, 1 dB - 250 watts, 2 dB - 150 watts
Temperature range	-30°C to +70°C
Cavity electrical length	¼ wavelength
Cavity size (Diam. x H) in. (cm)	8 x 11.875 (20.3 x 30.2)
Outer conductor, end plates	6061-T6 aluminum
Inner conductor, coupling loops	Silver plated copper
Tuning rod	Invar
Contactors, fingerstock	Beryllium copper
Connectors	N or UHF female (opt.)
Finish	Gray acrylic enamel

NOTE: When ordering be sure to specify exact frequency and model number. Contact the factory if additional information or assistance is required.

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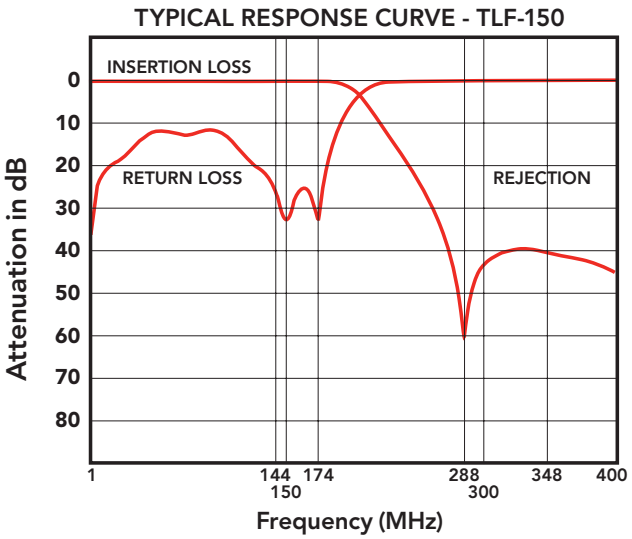
TLF-50, -90, -90H, 150, 450, 860
LOWPASS FILTERS

40 - 960 MHz

TLF-50	40-54 MHz
TLF-90,90H	88-108 MHz
TLF-150	144-174 MHz
TLF-450	406-512 MHz
TLF-860	806-960 MHz

Telewave Lowpass Filters eliminate harmonics, spurs, and intermodulation products that may occur above the fundamental frequency of a transmitter. These devices feature extremely low insertion loss, and are designed to be installed in the transmission line continuously. The standard connector configuration is N-Female to N-Male. Other combinations are available, including 7-16 DIN (extra cost).



TLF-150

TLF-90H

ELECTRICAL DATA	TLF-50	TLF-90	TLF-90H	TLF-150	TLF-450	TLF-860
Frequency range (MHz)	40-54	88-108	88-108	144-174	406-512	806-960
Impedance (nom.)	50 ohms					
VSWR (max)	1.3:1					
Power (max)	200 W	200 W	1000 W	400 W	200 W	200 W
Insertion loss	0.15 dB typ. / 0.25 dB max					
Rejection at 2Fc (typ)	30 dB	40 dB	35 dB	40 dB	50 dB	45 dB

MECHANICAL DATA	TLF-50 TLF-90	TLF-90H	TLF-150 TLF-450 TLF-860
Dimensions (HWL) in.	1.25 x 1.5 x 4	1.625 x 2.5 x 4.5	1.25 x 1.5 x 4
Dimensions (HWL) cm	3.2 x 3.8 x 10.2	4.1 x 6.4 x 11.4	3.2 x 3.8 x 10.2
Weight lb. (kg)	0.5 (0.23)	1 (0.45)	0.5 (0.23)
Connectors	Standard configuration is N-F to N-M for inline use. Any combination of N, UHF, BNC, or 7-16 DIN male or female may be specified. (7-16 DIN is additional cost.)		

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TWDS-5038 Rev. 1/07

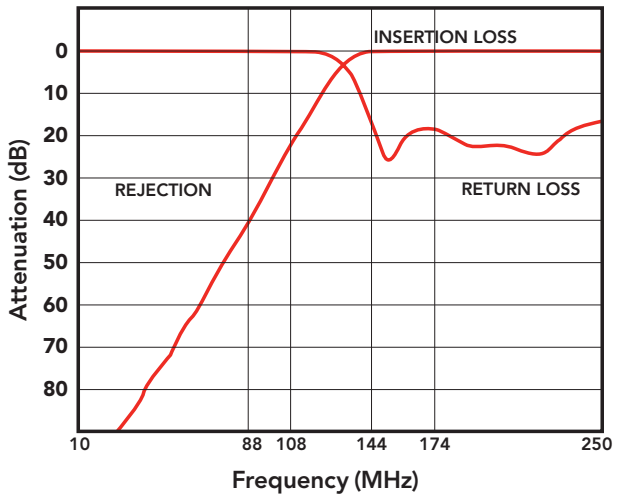
THF-150, 450, 860
HIGHPASS FILTERS

144 - 870 MHz

THF-150	144-174 MHz
THF-450	450-470 MHz
THF-860	850-870 MHz

Telewave Highpass Filters eliminate spurs and noise that may occur below the fundamental frequency of a transmitter. They are also used to protect receivers from nearby high power transmitters. These devices feature extremely low insertion loss, and are designed to be installed in the transmission line continuously. The standard connector configuration is N-Female to N-Male. Other combinations are available, including 7-16 DIN (extra cost).

TYPICAL RESPONSE CURVE - THF-150



THF-150

ELECTRICAL DATA	THF-150	THF-450	THF-860
Frequency range	144-174 MHz	450-470 MHz	850-870 MHz
Impedance (nom.)	50 ohms		
VSWR (max)	1.3:1		
Power (typ.)	25 watts continuous / 50 watts intermittent - Contact Telewave for higher power		
Insertion loss	0.15 dB typ. / 0.25 dB max		
Rejection (typ) at 1/2 Fc	50 dB	40 dB	10 dB

MECHANICAL DATA	THF-150 / 450 / 860
Dimensions (HWL) in.	1.25 x 1.5 x 4
Dimensions (HWL) cm	3.2 x 3.8 x 10.2
Weight lb. (kg)	0.5 (0.23)
Connectors	Standard configuration is N-F to N-M for inline use. Any combination of N, UHF, BNC, or 7-16 DIN male or female may be specified. (7-16 DIN is additional cost.)

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TWDS-5039 Rev. 2/07

TWX-50, 150
RECEIVER CRYSTAL FILTER

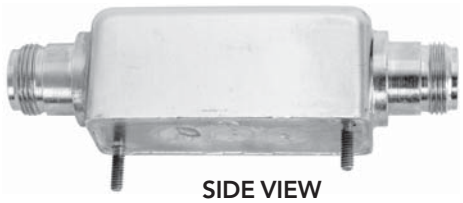
50 - 150 MHz

TWX-50	36-88 MHz
TWX-150	138-174 MHz

Telewave Crystal Filters provide an extremely narrow bandpass for a single frequency, to protect a receiver from nearby transmitters and adjacent channel interference. This bandpass is much sharper than a typical high "Q" cavity filter.

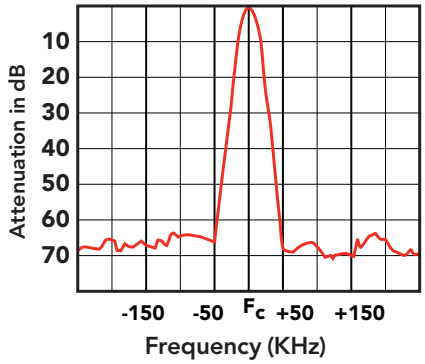
The combination of a crystal filter and a Telewave TLA or TGA series preamplifier can often rescue a receiver that has been impacted by an new adjacent transmitter, or allow implementation of a system with insufficient available frequency spacing.

TWX-50, 150



SIDE VIEW

TYPICAL RESPONSE



SPECIFICATIONS	TWX-50	TWX-150
Frequency range	36-88 MHz	138-174 MHz
Attenuation ± 30 KHz (min)	20 dB	20 dB
Attenuation ± 50 KHz (min)	50 dB	60 dB
Insertion loss (typ)	4 dB	7 dB
Impedance / VSWR (max)	50 ohms / 1.2:1	
Input level (max)	0 dBm	
Temperature	-20° to +70° C	
Dimensions (HWL) in. (cm)	1 x 1 x 3.75 (2.5 x 2.5 x 9.5)	
Weight lb. (kg)	0.5 (0.23)	

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